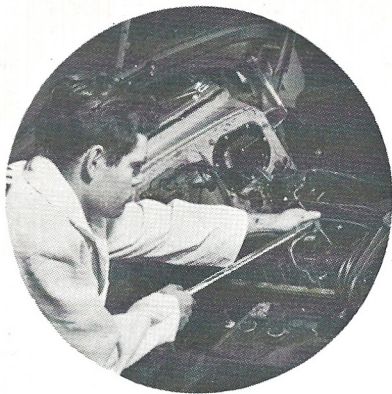




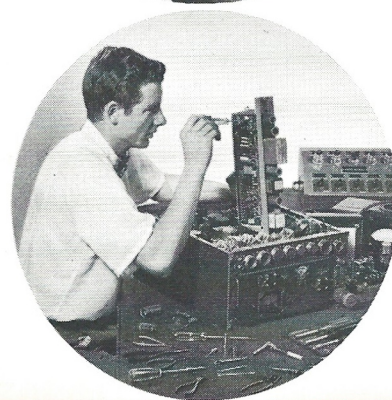
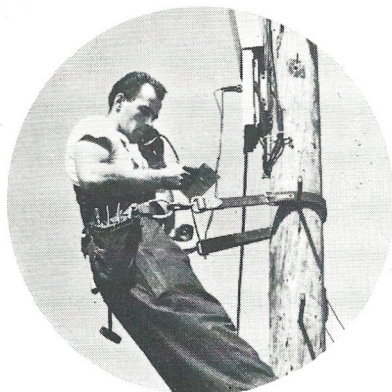
HAND TOOLS

FOR ALL INDUSTRIES





PROTO TOOLS
PROFESSIONAL QUALITY TOOLS



SKILLED TOOL USERS in every industry throughout the world prefer PROTO fine quality hand tools for professional work. In this catalog are over 2200 different tool models and sizes, making it possible to select the *right* tool for every job in every field...motors, machinery, transportation, communication, construction, marine, governmental activities, manufacturing, maintenance, plumbing, hobbies, farm and home use.

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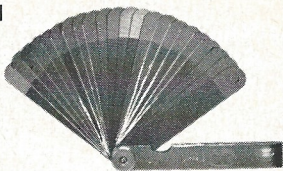
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1961

NO. 000N MASTER FEELER GAUGE SET

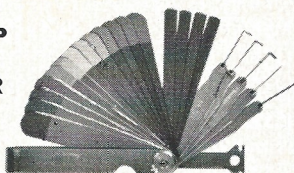


**22 STEP-GROUND "GO-AND-NO-GO"
BLADES
FROM .004/6" TO .025/27"**

Each straight tempered steel blade of this feeler gauge set is accurately step-ground to give .002" tolerance. With a range from .004" to .027", the new No. 000N handles most maintenance and repair requirements for engine valves, bearings, mating parts, setting up cross slides, gibs, etc.

004/6, 005/7, 006/8, 007/9, 008/10,
009/11, 010/12, 011/13, 012/14,
013/15, 014/16, 015/17, 016/18,
017/19, 018/20, 019/21, 020/22,
021/23, 022/24, 023/25, 024/26,
025/27 Wt. .25

NO. 000P FORD MASTER GAUGE SET

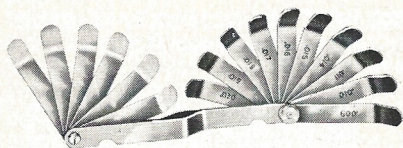


Containing 22 different gauges and one electrode bending tool. Proto's New No. 000P Gauge Set contains all the sizes and types of gauges needed for late model Ford engines. Thirteen step-ground "go-and-no-go" blades give clearance .010/12" to .025/27".

010/12, 011/13, 012/14, 013/15,
014/16, 015/17, 016/18, 017/19,
018/20, 019/21, 021/23, 024/26,
025/27

Four step-ground ignition blades will set points accurately at .015", .016", .020" or .025". For spark plug gaps, three 90° offset blades are provided in .025" to .028" and .035" sizes. Two straight wire blades are included for voltage regulator setting—in .017" and .030" sizes. A spark plug electrode bending tool is also provided. Wt. .25

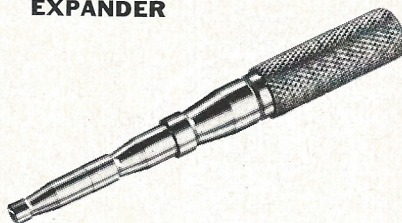
NO. 000R UNIVERSAL OVERHEAD VALVE GAUGE SET



The Universal over-head valve gauge set No. 000R contains 16 bent feeler gauges from .009" to .027". Each blade is offset at the right angle to protect mechanic's hands from hot manifolds while setting overhead valves on all late model cars. Each blade may be tightened securely in working position. The sizes are etched in each tempered steel blade. All blades are accurately ground and precision tested. Wt. .20

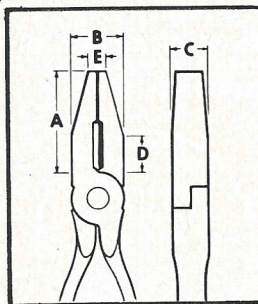
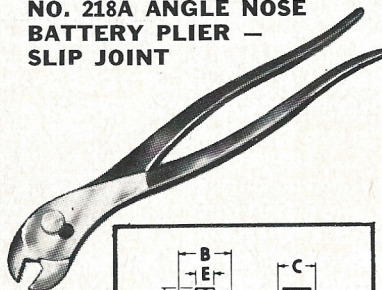
009, 010, 011, 014, 015, 016, 017, 018,
019, 020, 021, 023, 024, 025, 026, 027

NO. 137 TUBING EXPANDER



Precision made, hardened alloy steel for swedging $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " O.D. copper tubing. Chrome plated. A must for use on copper tubing in plumbing, industrial maintenance and many other fields. Length $8\frac{7}{8}$ " Wt. 1.18 Lbs.

NO. 218A ANGLE NOSE BATTERY PLIER — SLIP JOINT



Thin jaws set at 30° angle. Easily turns terminal nuts. Sharp teeth hold and turn damaged and corroded nuts. Slip joint action handles wide range of nut and bolt sizes. Valuable for all general gripping purposes. Maximum parallel jaw opening $1\frac{5}{16}$ ".

LTH.	WT.	A	B	C
8"	.42 Lb.	$1\frac{9}{32}$ "	$1\frac{3}{16}$ "	$\frac{5}{16}$ "

NO. 252A WIRE HOSE CLAMP PLIER ... SLIP JOINT



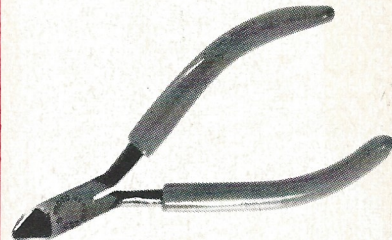
Installs and repairs Wire Spring Tension Clamps. New slip joint action grips full range of clamp sizes. Forged of special alloy steel. Polished and chrome plated. Wt. .50

LENGTH	WEIGHT	A	B	C
7 $\frac{3}{4}$ "	.50 Lb.	$1\frac{1}{16}$ "	$1\frac{7}{16}$ "	$2\frac{3}{4}$ "

SPARE BOLT
& NUT NOS.

202-B & 240-N

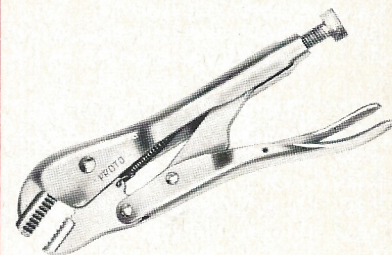
NO. 287G MIDGET DIAGONAL PLIERS WITH HANDEZE GRIPS



Midget jaws for flush-cutting in confined areas. With plastic Handeze grips for greater hand comfort. Wide-flaring handles to fit hand. Special alloy steel. Cutting edges induction-hardened.

Wt. .20

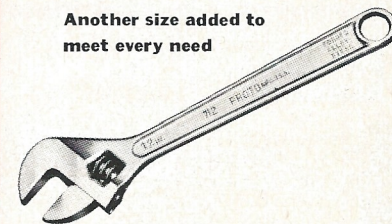
NO. 291R LEVER-WRENCH PLIER WITH QUICK RELEASE



Four tools in one—a powerful hand-vise, clamp, pipe wrench and plier. Lever action locks jaws in holding position, with one-handed pressure up to one ton. Quick release removes pressure instantly. Wt. .97

NO. 718 ADJUSTABLE WRENCHES—18 inch

Another size added to
meet every need



STANDARD ADJUSTABLE WRENCHES

NO.	LTH.	MAX. OPG.	FINISH	WT. LB.
718	18"	$2\frac{1}{16}$ "	Full	6
718S	18"	$2\frac{1}{16}$ "	Blk. Indust.	6

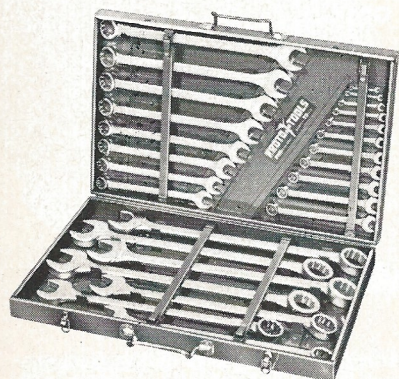
CLIK-STOP ADJUSTABLE WRENCH

NO.	LTH.	MAX. OPG.	FINISH	WT. LB.
718L	18"	$2\frac{1}{16}$ "	Full	6
718SL	18"	$2\frac{1}{16}$ "	Blk. Indust.	6

SUPPLEMENT TO PROTO CATALOG NO. 6021

(SEE BACK COVER ALSO)

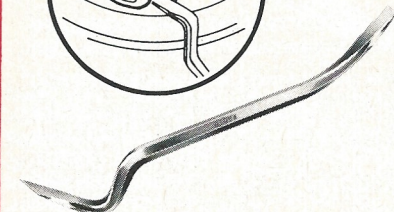
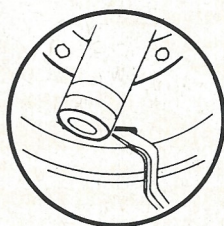
NO. 1200-A COMBINATION WRENCH SET . . . 26 PIECE



A perfect repair and maintenance set for service work on big machinery and rolling equipment. Saves valuable time. Contains 26 combination wrenches. Openings $\frac{1}{4}$ " to 2". Each wrench locked in position quickly removed for use. Easily taken to where repairs are needed. Always has right wrench for job. A Proto exclusive. Compact steel carrying case (deep red finish). Easily carried from job to job.

NO.	OPENING SIZE	NO.	OPENING SIZE
1208	$\frac{1}{4}$ "	1236	$1\frac{1}{8}$ "
1210	$\frac{5}{16}$ "	1240	$1\frac{1}{4}$ "
1212	$\frac{3}{8}$ "	1242	$1\frac{5}{16}$ "
1214	$\frac{7}{16}$ "	1244	$1\frac{3}{8}$ "
1216	$\frac{1}{2}$ "	1246	$1\frac{7}{16}$ "
1218	$\frac{9}{16}$ "	1248	$1\frac{1}{2}$ "
1220	$\frac{5}{8}$ "	1252	$1\frac{5}{8}$ "
1222	$1\frac{1}{16}$ "	1254	$1\frac{11}{16}$ "
1224	$\frac{3}{4}$ "	1256	$1\frac{3}{4}$ "
1226	$1\frac{3}{16}$ "	1258	$1\frac{13}{16}$ "
1228	$\frac{7}{8}$ "	1260	$1\frac{7}{8}$ "
1230	$1\frac{5}{16}$ "	1264	2"
1232	1"	9976	Box
1234	$1\frac{1}{16}$ "		

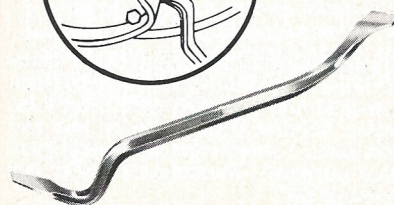
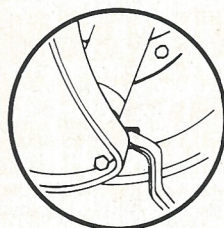
NO. 2011 CORVAIR BRAKE ADJUSTING TOOL



Special modified end adjusts Corvair, Chevrolet, Buick—clears suspension system obstructions. Opposite end adjusts many other Bendix brakes. Hot-formed from special alloy steel. Chrome plated. 9" long. Lots of leverage.

Wt. .29 Lbs.

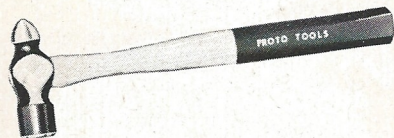
NO. 2012 BRAKE ADJUSTING TOOL . . . PONTIAC TEMPEST



Designed to clear suspension obstructions on front wheels of Pontiac Tempest. Special angled blade with notches speeds adjustment of front brakes. Standard end for rear wheels and other Bendix-type brakes. Alloy steel, chrome plated.

Wt. .28 Lbs. Lth. $9\frac{1}{16}$ "

NO. 1340P 2½ LB. BALL PEIN HAMMER



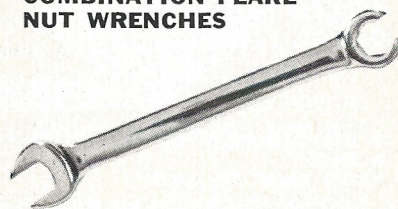
Large size now available for heavier work. 16" long. Accurately balanced. Head—drop forged of high grade alloy steel; scientifically heat-treated; polished face, chamfer, cheeks and pein. Handle—fine grade hickory; octagonal-shaped for comfortable grip; finished in clear lacquer with green over-dip.

NO.	LGTH.	WT. LBS.	CLASS
1340P	16"	2.80	2½ Lb.

NO. 1340PH HANDLE

NO.	A	B	LGTH.	WT. LBS.
1340PH	$2\frac{3}{32}$ "	$1\frac{1}{32}$ "	$16\frac{3}{4}$ "	.50

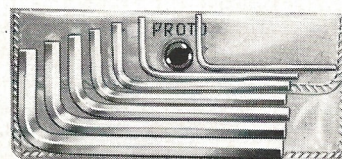
NO. 3751 THRU 3757 COMBINATION FLARE NUT WRENCHES



Flare nut wrench with open end. For use on tubing fittings—brake systems, compressors, fluid and gas lines, hydraulic units. Open end for light pressure or speed. Long handles for ample leverage. Thick heads won't damage soft metals. Forged from special alloy steel. Quality chrome plate.

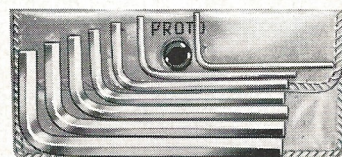
NO.	OPEN-ING	HEAD SLOT	HEAD THKNS.	LGTH.	WT. LBS
3751	$\frac{3}{8}$ "	$1\frac{9}{64}$ "	$\frac{7}{8}$ "	$5\frac{5}{8}$ "	.26
3752	$\frac{7}{16}$ "	$2\frac{3}{64}$ "	$1\frac{5}{16}$ "	6"	.30
3753	$\frac{1}{2}$ "	$2\frac{5}{64}$ "	1"	$6\frac{3}{8}$ "	.34
3754	$\frac{9}{16}$ "	$2\frac{9}{64}$ "	$1\frac{3}{32}$ "	$6\frac{7}{8}$ "	.40
3755	$\frac{5}{8}$ "	$3\frac{3}{64}$ "	$1\frac{1}{16}$ "	$7\frac{5}{8}$ "	.47
3756	$1\frac{1}{16}$ "	$3\frac{7}{64}$ "	$1\frac{9}{32}$ "	$8\frac{3}{4}$ "	.54
3757	$\frac{3}{4}$ "	$4\frac{1}{64}$ "	$1\frac{11}{32}$ "	$9\frac{1}{4}$ "	.65

NO. 4975 WRENCH SET, METRIC . . . HOLLOW HEAD SCREW



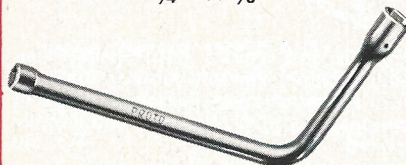
Needed for use on the large numbers of cars, machine tools, equipment, etc. using metric hollow head screws. All keys standard length. Heat-treated tool steel. Black Rust-proof finish. For screw sizes: 2 mm; 2.5 mm; 3 mm; 4 mm; 5 mm; 6 mm; 8 mm. All in handy plastic kit to prevent loss. Wt. .37 Lb.

NO. 4976 WRENCH SET, METRIC . . . HOLLOW HEAD SCREW



Valuable set for industrial maintenance on machine tools and equipment and some foreign cars and trucks using metric hollow head screws. All keys standard length. Heat-treated tool steel. Black Rust-proof finish. For screw sizes: 4 mm; 5 mm; 6 mm; 8 mm; 10 mm; 12 mm; 14 mm. All in handy plastic kit to prevent loss. Wt. 1.37 Lb.

NO. 2013 BRAKE BLEEDER TOOL . . . $\frac{1}{4}$ " & $\frac{3}{8}$ "



Speeds brake work. $\frac{1}{4}$ " hex opening for compact cars; $\frac{3}{8}$ " hex for conventional cars and trucks. Vent holes in socket-end permit lines to be bled without removing tool from bleeder screw. Hot forged alloy steel, chrome plated.

Wt. .24 Lb. Lth. $6\frac{3}{4}$ "

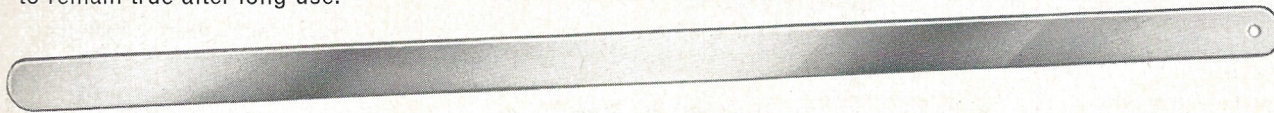
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Ell Handles.....44, 47	Obstruction Wrenches.....23, 30	Soft Face Hammers, Repl. Tips.....24	38, 42, 44, 62
End Cutting Nippers.....12	Offset Box Wrenches.....23	Soil Pipe Chisels.....3	Spud End.....27
Engine Tools.....37, 38	Offset Calkers.....4	Solder Paddles.....26	Striking.....27
Engineer's Wrenches.....72	Offset Screwdrivers.....59	Spanners.....73	Tappet.....28
Extractors, Screw & Pipe.....57	Open End Wrenches.....28, 29, 30	Spark Plug Gauges.....2	Torque.....50
Extension Bars.....52-56	Overhead Valve Adjusters.....39	Spark Plug Holding Skts. 38, 42, 44	Universal Distributor.....38
Face Spanner, Adjustable.....73	Parker-Kalon type Screw	Speed Handles.....41, 43, 44	Whitworth.....23, 61
Factory Tool Sets.....62-67	Sockets.....51, 52, 53	Spring Yarning Irons.....4	Yarning Irons.....4
Feeler Gauges.....2	Parts.....75	Spud End Wrenches.....27	
Fender-Body Tools.....25-26	Pecking Hammers.....24	Standard Feeler Gauges.....2	
	Phillips Screwdrivers.....59		

FEELER GAUGES AND GAUGE SETS



STANDARD FEELER GAUGES

Accurately ground and correctly heat treated to remain true after long use.



SHORT BLADES— $\frac{1}{2}$ " Wide, $3\frac{1}{16}$ " Long

NO.†	WT., LB.
0015	.001
002	.001
003	.001
004	.002
005	.002
006	.003
007	.003
008	.004
009	.004

NO.†	WT., LB.
010	.004
011	.004
012	.004
013	.005
014	.005
015	.005
016	.006
017	.006
018	.007

NO.†	WT., LB.
019	.007
020	.008
022	.009
025	.010
030	.011
032	.013
035	.014
040	.016

LONG BLADES— $\frac{1}{2}$ " Wide, 12" Long

NO.†	WT., LB.
0015L	.002
002L	.004
003L	.006
004L	.008
005L	.009
006L	.012
008L	.016
010L	.019
011L	.019
012L	.021

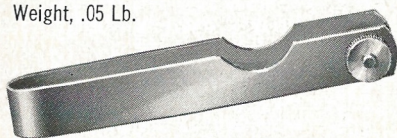
NO.†	WT., LB.
013L	.023
014L	.023
015L	.027
016L	.027
017L	.028
018L	.030
019L	.031
020L	.032
021L	.035
022L	.036

NO.†	WT., LB.
025L	.040
026L	.041
027L	.043
028L	.046
030L	.050
032L	.054
035L	.057
040L	.070

†No. Indicates Tool No. and Thickness in Thousandths of an Inch (Except 0015 and 0015L, Which Indicate Thickness in Ten Thousandths).

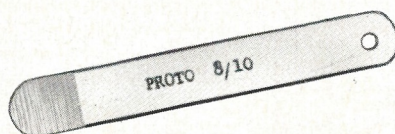
NO. 000C FEELER GAUGE HOLDER

For $3\frac{1}{16}$ " feeler gauge blades. Holds all available sizes. Weight, .05 Lb.



STEP-CUT FEELER GAUGES

"Go and no-go" type, each blade having two different thicknesses. Width, $\frac{1}{2}$ ". Length, $3\frac{1}{4}$ ".



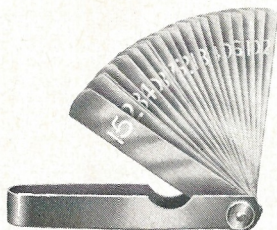
†No. Indicates Both Tool No. and Thicknesses in Thousandths of an Inch.

NO.†	WT., LB.
004/6	.002
005/7	.003
006/8	.003
007/9	.004
008/10	.004
009/11	.004
010/12	.006
011/13	.006
012/14	.006

NO.†	WT., LB.
013/15	.007
014/16	.007
015/17	.008
016/18	.008
017/19	.009
018/20	.009
019/21	.010
020/22	.010

NO. 000A STANDARD FEELER GAUGE SET

Nine short blades—.003, .004, .005, .006, .008, .010, .012, .015 and .018—in 000C holder. Wt., .09 Lb.

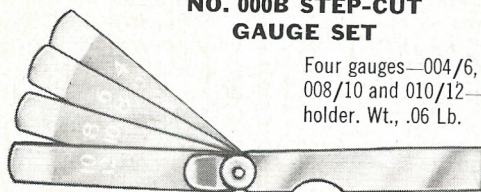


NO. 000AA STANDARD FEELER GAUGE SET

Master set, with 25 short blades—.0015 through .040, except .019—in 000C holder. Wt., .19 Lb.

NO. 000B STEP-CUT GAUGE SET

Four gauges—.004/6, .006/8, .008/10 and .010/12—in 000C holder. Wt., .06 Lb.

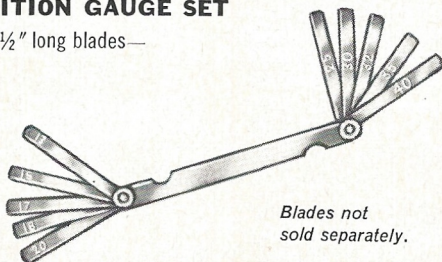


NO. 000BB STEP-CUT GAUGE SET

Master set, with eight gauges—.004/6 through .011/13—in 000C holder. Wt., .08 Lb.

NO. 000D IGNITION GAUGE SET

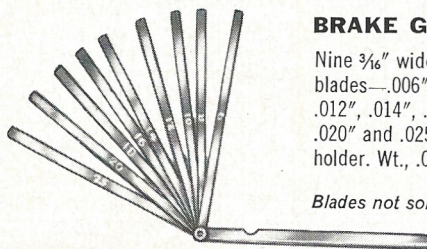
Ten $\frac{3}{16}$ " wide by $1\frac{1}{2}$ " long blades—.013", .015", .017", .018", .020", .025", .030", .032", .035" and .040" thick—in holder. Wt., .03 Lb.



Blades not sold separately.

NO. 000E BRAKE GAUGE SET

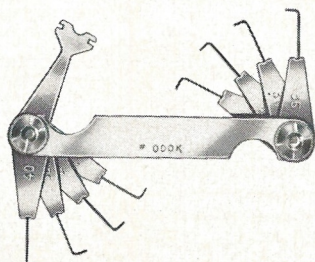
Nine $\frac{3}{16}$ " wide by 4" long blades—.006", .008", .010", .012", .014", .016", .018", .020" and .025" thick—in holder. Wt., .04 Lb.



Blades not sold separately.

No. 000K SPARK PLUG GAUGE SET

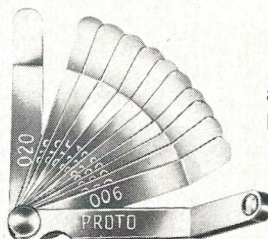
For checking spark plug gaps, includes electrode bender. Eight bent-wire gauges—.022", .025", .027", .028", .030", .032", .035" and .040" thick—in holder. Wt., .06 Lb.



Gauges not sold separately

NO. 000M BENT GAUGE SET

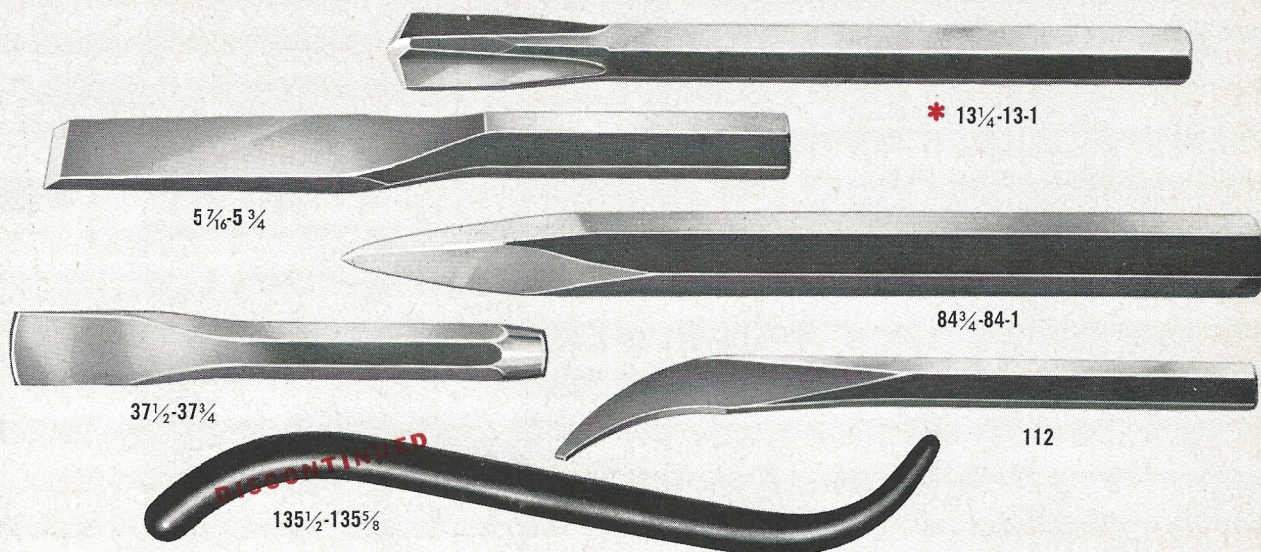
Eleven $\frac{1}{2}$ " by $4\frac{3}{16}$ " bent blades—.006", .008", .010", .011", .012", .013", .014", .015", .018", .019" and .020"—in holder and plastic pouch. Wt., .15 Lb.



Blades not sold separately.

PLUMBING TOOLS

* GGG-D-691, Type I



Proto is one of the world's largest producers of professional quality plumbing tools, and provides the most complete line available. In addition to the specialized tools on this page and the next, you will find many others in this catalog needed for plumbing, heating, ventilating and air conditioning work, such as pipe wrenches; flare nut and adjustable wrenches; box, open end and combination wrenches; punches; chisels; pliers; screwdrivers; gear and bearing pullers; hammers; bars; tool chests, boxes and kits; and socket sets in 1/4", 3/8", 1/2" and larger drives.

FLOOR OR WOOD CHISELS

NO.	STOCK SIZE	WIDTH OF CUT	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
5 7/16	7/16"	5/8"	4 1/2"	10"	.36
5 1/2	1/2"	3/4"	4 1/4"	10"	.50
5 5/8	19/32"	1"	3 3/4"	10"	.70
5 3/4	23/32"	1 3/16"	3 1/2"	10"	1.00

* STAR DRILLS

13 1/4	1/4"	1/4"	...	12"	.16
13 3/16	1/4"	5/16"	...	12"	.16
13 3/8	5/16"	3/8"	...	12"	.26
13 1/2	3/8"	1/2"	...	12"	.38
13 5/8	7/16"	5/8"	...	12"	.52
13 3/4	1/2"	3/4"	...	12"	.70
13 7/8	19/32"	7/8"	...	12"	1.07
13-1	23/32"	1"	...	12"	1.52

SOIL PIPE CHISELS

37 1/2	1/2"	5/8"	2 1/8"	6 1/2"	.35
37 5/8	19/32"	3/4"	2 3/8"	7"	.57
37 3/4	23/32"	7/8"	2 7/8"	7 1/2"	.84

CONCRETE GADS

84 3/4	23/32"	...	2 1/8"	12"	1.40
84 7/8	13/16"	...	2 1/2"	12"	1.80
84-1	15/16"	...	2 3/4"	12"	2.3

LEAD-PICKING TOOL

112	1/2"	3/16"	2 3/8"	9"	.46
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BENDING IRONS

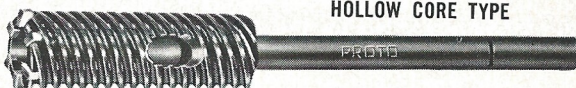
135 1/2	1/2"	...	...	10 1/2"	.53
135 5/8	19/32"	...	...	10 5/8"	.82

DISCONTINUED

SOLID SHAFT TYPE



HOLLOW CORE TYPE



CARBIDE POWER TYPE MASONRY DRILLS

For fast, accurate drilling of concrete, tile, bricks, slate, marble, rock, stone, plastics, glass, steel, plaster, asphalt, micarta, etc. Have sharp tungsten carbide cutters and three or more spirals. Turned by electric or air drills. Solid type leaves no dead center. Hollow core type removes drilled materials quickly.

SOLID SHAFT TYPE

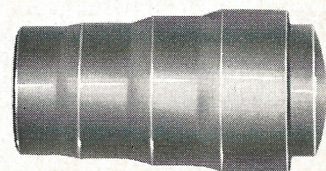
NO.	HOLE SIZE	SHANK DIAMETER	OVERALL LENGTH	WT., LBS.
11 3/16	3/16"	3/16"	4"	.03
11 1/4	1/4"	1/4"	5"	.06
11 3/8	5/16"	1/4"	5"	.06
11 1/2	3/8"	1/4"	5"	.09
11 5/8	7/16"	1/4"	5"	.11
11 3/4	1/2"	1/4"	6"	.18

HOLLOW CORE TYPE

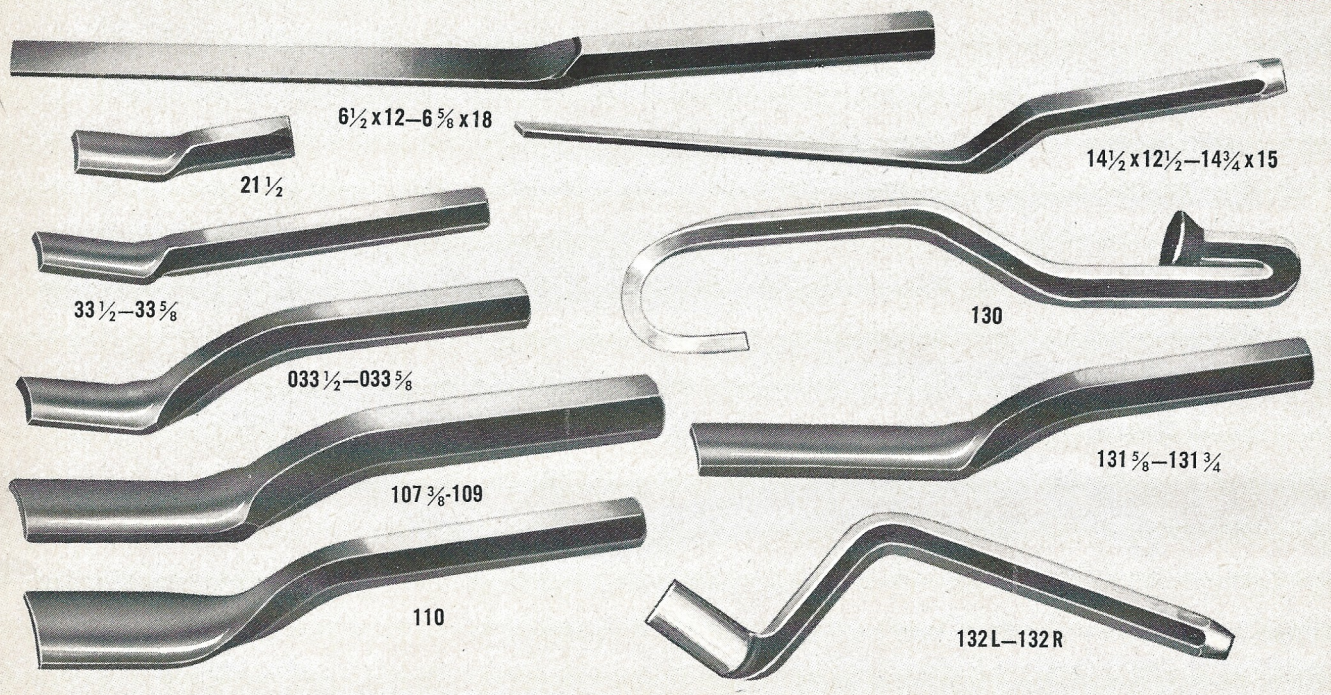
12 5/8	5/8"	3/8"	8"	.24
12 3/4	3/4"	3/8"	8 1/2"	.32
12 1/2	7/8"	1/2"	9"	.54
12-1	1"	1/2"	9"	.60
12-1 1/8	1 1/8"	1/2"	10"	.78

NO. 136 TUBING EXPANDER

A very handy tool for plumbers and all others who work with tubing. Three separate steps expand 1/4", 1 3/8" and 1 1/2" tubing. Length, 3 3/8". Weight, .86 Lb.



PLUMBING TOOLS



For half a century Proto has made the best possible plumbing tools at the best possible price. Yarning irons are slightly offset for clearance. Long calkers, for calking lead in hub of soil pipe, are ground both inside and out, and their concave blades fit 4" pipe. Water main calkers are ground square, have an offset handle for knuckle clearance, and do a fast job of calking joints. Left and right calkers are for use near walls and in corners.

SPRING YARNING IRONS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
6 1/2 x 12	1 1/32"	1/16"	5/8"	6 1/2"	12"	.45
6 5/8 x 12 1/2	1 1/32"	1/8"	3/4"	7"	12 1/2"	.64
6 5/8 x 18	1 1/32"	3/32"	3/4"	13"	18"	.80

OFFSET YARNING IRONS

14 1/2 x 12 1/2	1 1/32"	1/16"	5/8"	6 3/4"	12 1/2"	.52
14 5/8 x 13	1 1/32"	3/32"	1 1/16"	7 1/4"	13"	.79
14 5/8 x 19	1 1/32"	3/32"	1 1/16"	12 3/4"	19"	.99
14 3/4 x 15	2 3/32"	3/32"	3/4"	9 1/2"	15"	1.18

CURVED PONY CALKERS (Inside & Outside)

21 1/2 In	1/2"	1/8"	3/4"	1 1/4"	3"	.13
21 1/2 Out	1/2"	1/8"	3/4"	1 1/4"	3"	.13

LONG CALKERS (Inside & Outside)

33 1/2 In	1/2"	1/8"	3/4"	1 1/2"	6 1/2"	.32
33 1/2 Out	1/2"	1/8"	3/4"	1 1/2"	6 1/2"	.32
33 5/8 In	1 1/32"	5/32"	7/8"	1 3/4"	7"	.52
33 5/8 Out	1 1/32"	5/32"	7/8"	1 3/4"	7"	.52

OFFSET CALKERS (Inside & Outside)

033 1/2 In	1/2"	1/8"	3/4"	1 1/2"	6 1/2"	.33
033 1/2 Out	1/2"	1/8"	3/4"	1 1/2"	6 1/2"	.33
033 5/8 In	1 1/32"	1/8"	7/8"	1 5/8"	7"	.57
033 5/8 Out	1 1/32"	1/8"	7/8"	1 5/8"	7"	.57
034 5/8 In	1 1/32"	1/8"	3/4"	1 1/4"	7"	.50
034 5/8 Out	1 1/32"	1/8"	3/4"	1 1/4"	7"	.50

WATER MAIN CALKERS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
107 3/8	1 3/16"	3/8"	1"	1 7/16"	8"	1.01
107 1/2	1 3/16"	1/2"	1"	2 5/16"	8"	1.04
109	2 3/32"	3/16"	1"	2 1 1/16"	8"	.83

BROAD CURVED NOSE CALKING IRON

110	1 1/32"	1/8"	1 1/2"	2"	8 1/2"	.71
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CEILING CALKER

130	1 1/32"	5/32"	1 1/16"	1 5/8"	10"	1.20
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LONG GASKET CALKERS

131 5/8	1 1/32"	5/32"	7/8"	4"	9 1/2"	.67
131 3/4	2 3/32"	3/16"	1"	4 1/4"	9 1/2"	.98

LEFT AND RIGHT CALKERS

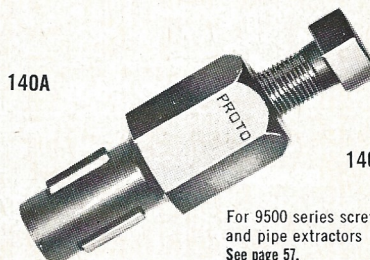
132L	1 1/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87
132R	1 1/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87

INTERNAL PIPE WRENCHES

Screw mandrel to force gripping dogs equally against interior of broken pipe or close nipples, etc. Then turn with wrench. No hammering to release.

No. 140A—Set of all 3 wrenches in plastic kit. Weight, 1.44 Lbs.

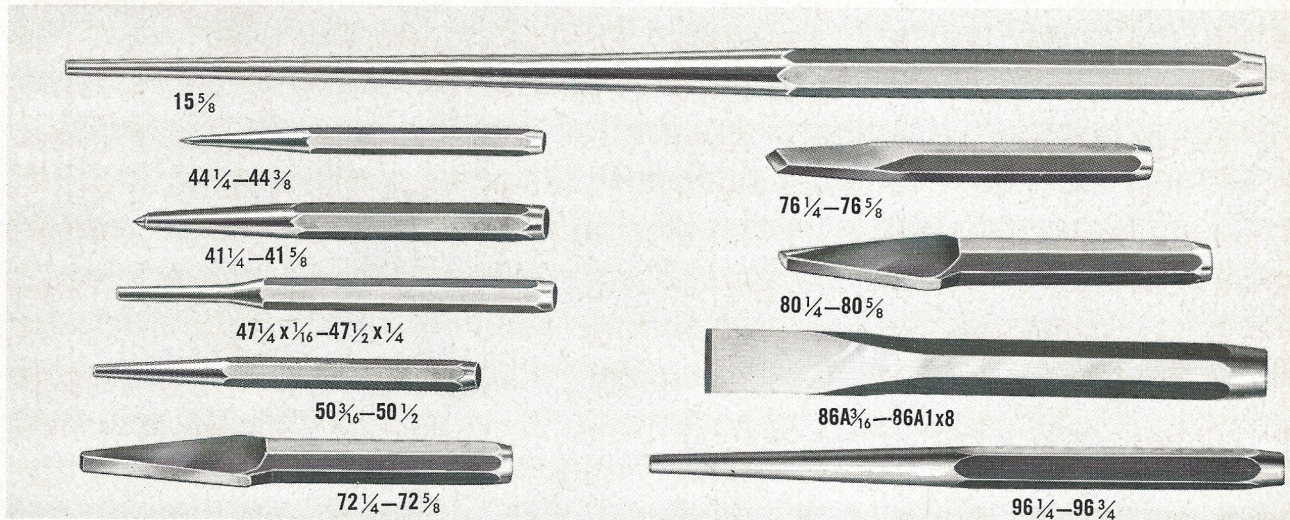
NO.	PIPE SIZE	OVERALL LENGTH	WT., LBS.	SPARE SET OF 3 JAWS NO.	SPARE SCREW NO.
140	1/2"	3 1/2"	.30	140J	140S
141	3/4"	3 3/4"	.51	141J	141S
142	1"	4"	.57	142J	142S



For 9500 series screw and pipe extractors See page 57.

PUNCHES AND CHISELS

For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918



Made of fine alloy steel, heat treated and tempered for long life, well balanced and easy to handle. (Proto tools made over fifty years ago can still be found in mechanics' kits, hard and tough, still doing the job for which they were made.)

ALIGNING PUNCH

NO.	POINT	STOCK	LGTH.	WT., LBS.
15 5/8	3/16"	1 9/32" Hex.	16"	.98

CENTER PUNCHES

41 1/4	...	1/4" Hex.	4 1/4"	.05
41 5/16	...	5/16" Hex.	4 5/8"	.09
41 3/8	...	3/8" Hex.	4 7/8"	.13
41 7/16	...	7/16" Hex.	5 1/4"	.19
41 1/2	...	1/2" Hex.	5 5/8"	.26
41 5/8	...	1 9/32" Hex.	6 1/4"	.44

PRICK PUNCHES

44 1/4	...	1/4" Hex.	4 3/4"	.05
44 5/16	...	5/16" Hex.	5"	.09
44 3/8	...	3/8" Hex.	5 1/4"	.13

RIVET OR PIN PUNCHES

47 1/4 x 1/16	1/16"	1/4" Hex.	4 3/8"	.05
47 1/4 x 3/32	3/32"	1/4" Hex.	4 3/4"	.05
47 3/16 x 1/8	1/8"	5/16" Hex.	5 1/4"	.09
47 5/16 x 3/32	3/32"	5/16" Hex.	5 5/8"	.10
47 3/8 x 3/16	3/16"	3/8" Hex.	6 1/8"	.15
47 7/16 x 7/32	7/32"	7/16" Hex.	6 1/2"	.20
47 1/2 x 1/4	1/4"	1/2" Hex.	6 3/4"	.30

STARTING PUNCHES

NO.	POINT	STOCK	LGTH.	WT., LBS.
50 3/16	1/16"	3/16" Hex.	4 1/4"	.03
50 1/4	3/32"	1/4" Hex.	5 5/8"	.05
50 5/16	1/8"	5/16" Hex.	5"	.10
50 3/8	3/16"	3/8" Hex.	5 5/8"	.15
50 7/16	7/32"	7/16" Hex.	6"	.23
50 1/2	1/4"	1/2" Hex.	6 1/2"	.31

CAPE CHISELS

NO.	CUT	STOCK	LGTH.	WT., LBS.
72 1/4	1 1/64"	1/4" Hex.	4 5/8"	.05
72 5/16	1 3/64"	5/16" Hex.	5 1/8"	.09
72 3/8	1 7/64"	3/8" Hex.	5 5/8"	.15
72 1/2	2 1/64"	1/2" Hex.	6 3/16"	.27
72 5/8	3/8"	1 9/32" Hex.	6 1/2"	.46

DIAMOND POINT CHISELS

76 1/4	5/32"	1/4" Hex.	4 5/8"	.06
76 5/16	3/16"	5/16" Hex.	5 1/8"	.10
76 3/8	1/4"	3/8" Hex.	5 5/8"	.15
76 1/2	5/16"	1/2" Hex.	6 1/8"	.28
76 5/8	3/8"	1 9/32" Hex.	6 1/2"	.48

HALF RND-NOSE CAPE CHISELS

NO.	CUT	STOCK	LGTH.	WT., LBS.
80 1/4	1 1/64"	1/4" Hex.	4 5/8"	.06
80 5/16	1 3/64"	5/16" Hex.	5 1/8"	.10
80 3/8	1 7/64"	3/8" Hex.	5 5/8"	.15
80 5/8	3/8"	1 9/32" Hex.	6 1/2"	.49

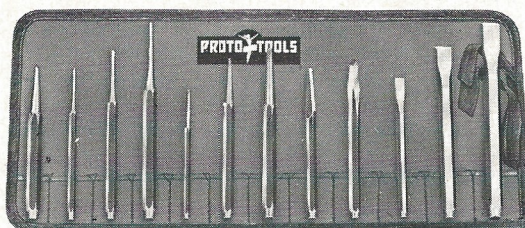
COLD CHISELS

86A 3/16	1/4"	3/16" Hex.	4 5/8"	.03
86A 1/4	5/16"	1/4" Hex.	5 1/8"	.06
86A 5/16	3/8"	5/16" Hex.	5 3/8"	.10
86A 3/8	7/16"	3/8" Hex.	5 5/8"	.17
86A 7/16	1/2"	7/16" Hex.	6 1/4"	.24
86A 1/2	5/8"	1/2" Hex.	6 5/8"	.35
86A 5/8	3/4"	1 9/32" Hex.	7 1/4"	.57
86A 3/4 x 8	7/8"	2 3/32" Hex.	8"	.92
86A 3/4 x 12	7/8"	2 3/32" Hex.	12"	1.44
86A 7/8 x 8	1"	1 3/16" Hex.	8"	1.26
86A 7/8 x 12	1"	1 3/16" Hex.	12"	1.94
86A 1 x 8	1 1/16"	1 5/16" Hex.	8"	1.64

LONG TAPER DRIFT PUNCHES

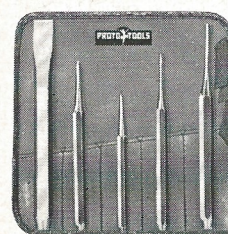
NO.	POINT	STOCK	LGTH.	WT., LBS.
96 1/4	3/32"	1/4" Hex.	10 1/8"	.11
96 5/16	1/8"	5/16" Hex.	10 1/8"	.18
96 3/8	3/16"	3/8" Hex.	10 1/8"	.27
96 7/16	7/32"	7/16" Hex.	10 3/16"	.35
96 1/2	1/4"	1/2" Hex.	10 3/16"	.46
96 5/8	5/16"	1 9/32" Hex.	10 3/16"	.73
96 3/4	3/8"	2 3/32" Hex.	10 1/4"	1.02

PUNCH AND CHISEL SETS



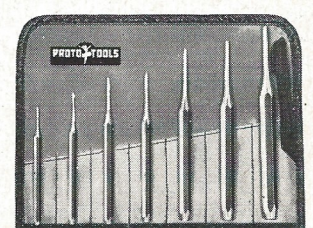
NO. 2 SET

A fine selection, providing the twelve punches and chisels used most frequently in practically all types of work. Includes Center Punch 41 3/8; Rivet or Pin Punches 47 1/4 x 3/32, 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punches 50 3/16, 50 5/16 and 50 3/8; Cape Chisel 72 5/16; Diamond Point Chisel 76 5/16, and Cold Chisels 86A 1/4, 86A 3/8 and 86A 1/2 in a red Vinyl Kit No. 2402. Weight, 1.55 Lbs.



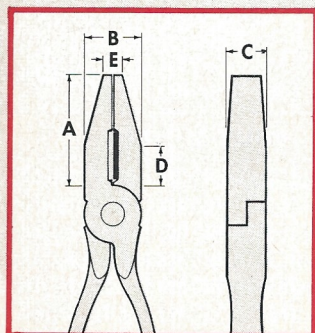
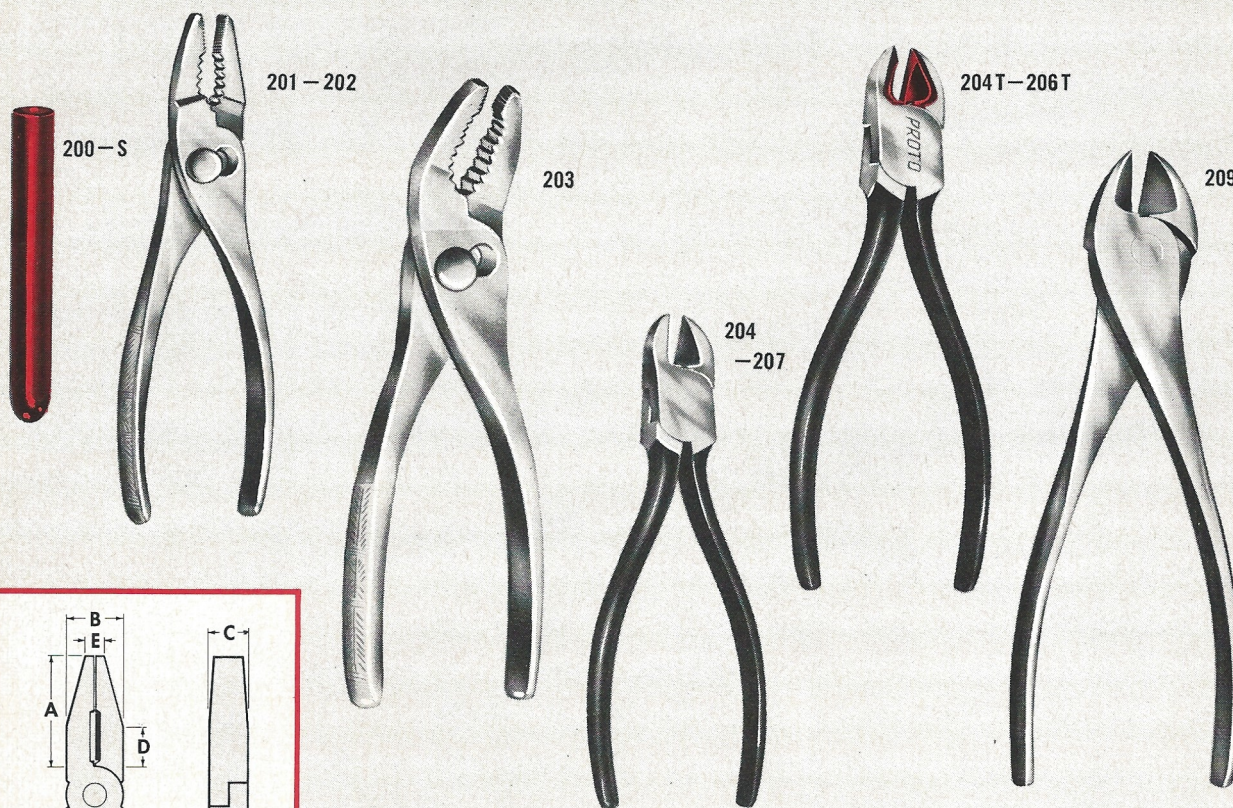
NO. 3 SET

A useful set, including Center Punch 41 3/8; Rivet or Pin Punches 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punch 50 5/16, and Cold Chisel 86A 1/2 in Vinyl Kit No. 2411. Weight, .95 Lbs.



NO. 47A SET

A handy master set of rivet or pin punches with all of the sizes available. Includes 47 1/4 x 1/16, 47 1/4 x 3/32, 47 5/16 x 1/8, 47 5/16 x 5/32, 47 3/8 x 3/16, 47 7/16 x 7/32 and 47 1/2 x 1/4 in red Vinyl Kit No. 2403. Weight, 1.10 Lbs.



Federal Specs.: GGG-P-471a. (Pliers & Nippers)
GGG-P-00471b. (Pliers) GGG-N-00350. (Nippers)

(For identification of individual tools see
"Proto Conversion to Federal stock No's." Bulletin No. 5918.)

You will find the right pliers for every job among the many types and sizes in the Proto line. And the highest quality. Skilled workmen with modern equipment forge and machine these pliers to highest standards. Long life is insured by their sturdy construction and high grade steels. They are easy to work, have good balance and "feel," correct leverage. Gripping teeth are properly shaped. Sharp cutting edges are perfectly matched and built for hard use. Handles are shaped for comfortable, sure grip. These superior features are the result of many years' experience in plier design.

"HANDEZE"* PLASTIC GRIPS FOR TOOL HANDLES

Red vinyl plastisol grips enhance appearance, increase gripping power and reduce muscle fatigue. They slip on easily, fit tight, wear long, and are replaceable. Many pliers are available with factory-fitted "Handeze" grips.

†NO.	SIZE	FIT PLIERS	INSIDE DIAM.	LENGTH	WEIGHT
200S	Small	4" to 6"	1/4"	3"	.02 Lb.
200M	Medium	6" to 8"	5/16"	4"	.04 Lb.
200L	Large	8" to 12"	3/8"	5"	.05 Lb.

†Covers Pair of Grips, Individually Packed by Pairs.

*See No. 299 Plier for Grip Installation.

NOS. 201 & 202 THIN NOSE SLIP JOINT PLIERS

Designed with a slim nose to reach into tight places. Have two jaw-opening adjustments and shear-type wire cutter. Two sizes. Chromed.

NO.	LENGTH	WEIGHT	BOLT NO.	NUT NO.	A	B	C
201	5 1/2"	.26 Lb.	240-B	240-N	23/32"	1 1/16"	1 1/64"
202	6 1/2"	.35 Lb.	202-B	240-N	1 15/64"	1 1/16"	13/64"

NO. 203 THIN BENT NOSE SLIP JOINT PLIER

Made with 30° offset thin nose which reaches into many places inaccessible with straight nose pliers. Has two jaw-opening adjustments and wire cutter of shear type. Chromed.

NO.	LENGTH	WEIGHT	BOLT NO.	NUT NO.	A	B	C
203	6 3/4"	.43 Lb.	202-B	240-N	1 5/16"	1 1/4"	13/64"

NOS. 204, 205, 206, 207 DIAGONAL CUTTING PLIERS

Thin, narrow jaws work easily in congested places. Useful for switch-board, telephone, ignition, electronic and electrical work. Induction-hardened cutting edges. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C
204	4 1/2"	.16 Lb.	23/32"	9/16"	1 1/32"
204G	4 1/2"	.20 Lb.	23/32"	9/16"	1 1/32"
204T	4 1/2"	.16 Lb.	23/32"	9/16"	1 1/32"
205	5"	.21 Lb.	3/4"	5/8"	3/8"
205G	5"	.25 Lb.	3/4"	5/8"	3/8"
205SG	5"	.24 Lb.	3/4"	5/8"	3/8"
205SGT	5"	.26 Lb.	3/4"	5/8"	3/8"
206	6"	.34 Lb.	27/32"	49/64"	7/16"
206G	6"	.40 Lb.	27/32"	49/64"	7/16"
206T	6"	.31 Lb.	27/32"	49/64"	7/16"
207	7 1/2"	.45 Lb.	1 1/16"	15/16"	29/64"
207G	7 1/2"	.50 Lb.	1 1/16"	15/16"	29/64"

G — Fitted with "Handeze" Plastic Grips.

T — Red plastic "Snip-Grip" inserts on cutting edges hold wire ends, prevent shorts, machine failures, eye injury.
— Has Coil spring. Won't pinch fingers.

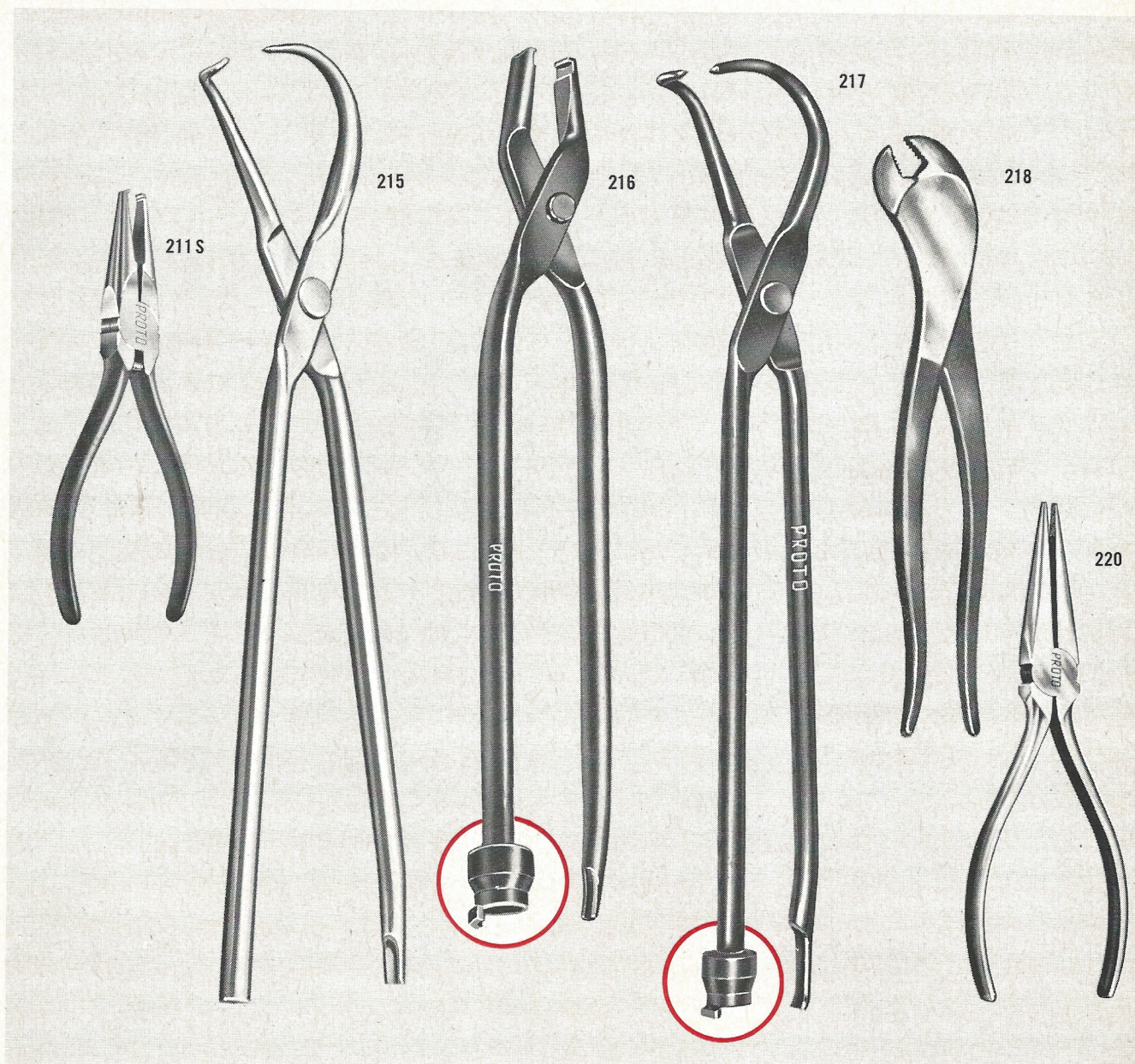
NO. 209 HEAVY-DUTY DIAGONAL CUTTING PLIER

Powerful cutter, with joint close to short jaws for great leverage. Cuts heavy wire with little effort. Induction-hardened. High quality alloy.

NO.	LENGTH	WEIGHT	A	B	C
209	7"	.47 Lb.	25/32"	1 3/16"	29/64"
209G	7"	.60 Lb.	25/32"	1 3/16"	29/64"

G—With "Handeze" Plastic Grips.

PLIERS



Federal Specs.: GGG-P-471a. (Pliers & Nippers)
GGG-P-00471b. (Pliers) GGG-N-00350. (Nippers)
(For identification of individual tools see
"Proto Conversion to Federal stock No's." Bulletin No. 5918.)

NO. 211S TRANSVERSE CUTTING PLIER WITH SPRING

A precision electronic plier. Gets into those places inaccessible to most conventional diagonal pliers, for quick, clean cuts. Induction-hardened cutting edges. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C
211S	5 1/2"	.25 Lb.	1 1/32"	2 1/32"	2 5/64"

NO. 215 BRAKE SPRING PLIER

Curved jaw clears edge of brake shoe to bring it in close adjustment with center line of spring. Thin hooked jaw slips easily under spring. A necessary plier for auto mechanics. Tough, high quality alloy.

215	12 1/2"	.61 Lb.			
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NO. 216 BENDIX BRAKE PLIER

Three tools in one! Speeds and simplifies Bendix brake repairs. Special jaws remove hold down cups. Replaceable Bendix Socket on one handle fits over anchor pin and lug lifts off anchor springs. Other handle end has shovel for replacing anchor pin springs. Tough, high quality alloy.

NO. 217 ALL-PURPOSE BRAKE PLIER

Combines jaws of No. 215 Brake Spring Plier and handle end features of No. 216 Bendix Brake Plier.

NO.	LENGTH	WEIGHT	REPLACEABLE BENDIX SOCKET NO.	BENDIX BRAKE TOOL NO.
216	11 1/4"	.62 Lb.	2005S	
217	13 1/2"	.78 Lb.	2005S	200-S

NO. 218 ANGLE NOSE BATTERY PLIER

Thin jaws at 30° angle make terminal nuts easily accessible. No matter what condition the nuts or bolts are in from corrosion or tool damage, the gripping jaws take a sure hold.

NO.	LENGTH	WEIGHT	A	B	C	E
218	8"	.43 Lb.	1 9/32"	1 3/16"	5/16"	
218G	8"	.53 Lb.	1 9/32"	1 3/16"	5/16"	

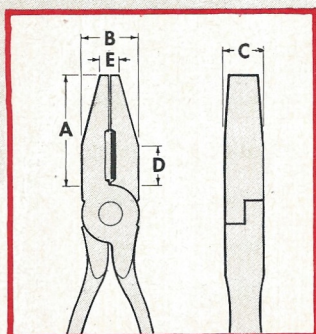
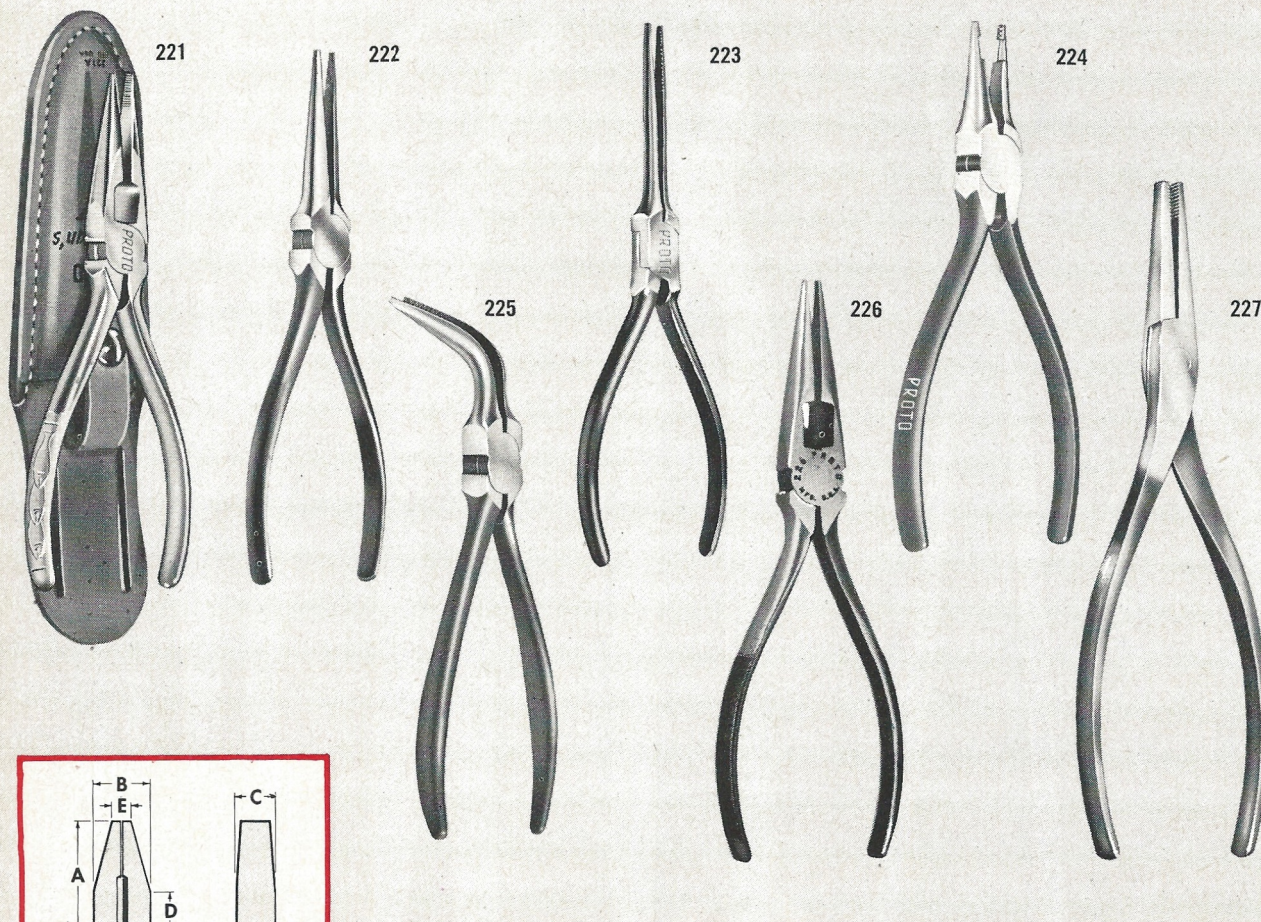
G—With "Handeze" Plastic Grips.

NO. 220 LONG CHAIN NOSE PLIER

Diamond-serrated jaws and long, slim nose make loops and bends in tight places. Absence of side cutter prevents cutting by mistake. Handy for various types of electrical work. Tough, high quality alloy.

220	6 1/2"	.30 Lb.	1 7/8"	1 1/16"	2 5/64"	3/32"
220G	6 1/2"	.34 Lb.	1 7/8"	1 1/16"	2 5/64"	3/32"

G—With "Handeze" Plastic Grips.



Federal Specs.: GGG-P-471a.
(Pliers & Nippers)

GGG-P-00471b. (Pliers)

GGG-N-00350. (Nippers)

(For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.)

NO. 221 FISHERMAN'S PLIER, WITH OR WITHOUT SHEATH

Sportsman's all-purpose plier. Needle nose jaws extract hooks, attach sinkers, cut leaders, tie flies, skin fish, repair reels, fix outboard motors. Heavy chrome plate. Fish knurl handles give sure grip. Belt-type, saddle leather, gold embossed sheath. Strap with snap button. Induction-hardened. High quality alloy. Makes perfect gift.

NO.	LENGTH	WEIGHT	A	B	C	D	E
221	6 3/4"	.29 Lb.	1 31/32"	1 1/16"	2 5/64"	1 5/32"	3/32"
221-A		.35 Lb.					
221-S		.06 Lb.					

A—Plier with Sheath.....S—Sheath only.

NO. 222 LONG NEEDLE NOSE PLIER

Has very thin nose for getting into places with restricted clearance. Needed for many jobs but especially useful for television, radio and all types of electronics work. High quality alloy steel.

222	6 3/4"	.28 Lb.	2 3/32"	1 1/16"	2 5/64"	—	3/32"
222G	6 3/4"	.32 Lb.					

G—With "Handeze" Plastic Grips.

NO. 223 LONG THIN NEEDLE NOSE PLIER

Extra slim-nosed electronic plier for gripping, looping and twisting wire and for light, confined precision work. High quality alloy steel.

223	6"	.13 Lb.	2 3/32"	1 5/32"	5/16"	—	3/32"
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NO. 224 ELECTRONICS & IGNITION CUTTING PLIER

Slim needle nose type with cutter only 3/16" back from tip. For reaching into close quarters to pull or cut wire. Coil spring holds plier in open position. Used for ignition, television, radio and other electronics assembly repair work. Induction-hardened cutters. High quality alloy.

NO.	LENGTH	WEIGHT	A	B	C	D	SPARE HANDLE SPRING
224	6"	.28 Lb.	1 3/8"	4 3/64"	2 5/64"	1/4"	285S-S
224G		.32 Lb.	1 3/8"	4 3/64"	2 5/64"	1/4"	285S-S

G—Fitted with "Handeze" Plastic Grips.

NO. 225 CURVED THIN NEEDLE NOSE PLIER

Same as No. 222 plier, except nose is bent at 78° angle. For reaching around obstructions.

NO.	LENGTH	WEIGHT	A	B	C	D	E
225	6"	.28 Lb.	1 1/4"	1 1/16"	2 5/64"	—	3/32"
225G	6"	.32 Lb.	1 1/4"	1 1/16"	2 5/64"	—	3/32"

G—With "Handeze" Plastic Grips.

NO. 226 NEEDLE NOSE SIDE CUTTING PLIER

The long nose, strong, extra sharp induction-hardened cutters make an ideal combination for electronic, telephone and other electrical work. A good long-reach plier for many types of jobs. High quality alloy.

226	6 3/4"	.29 Lb.	1 31/32"	1 1/16"	2 5/64"	1 5/32"	3/32"
226G	6 3/4"	.40 Lb.	1 31/32"	1 1/16"	2 5/64"	1 5/32"	3/32"

G—With "Handeze" Plastic Grips.

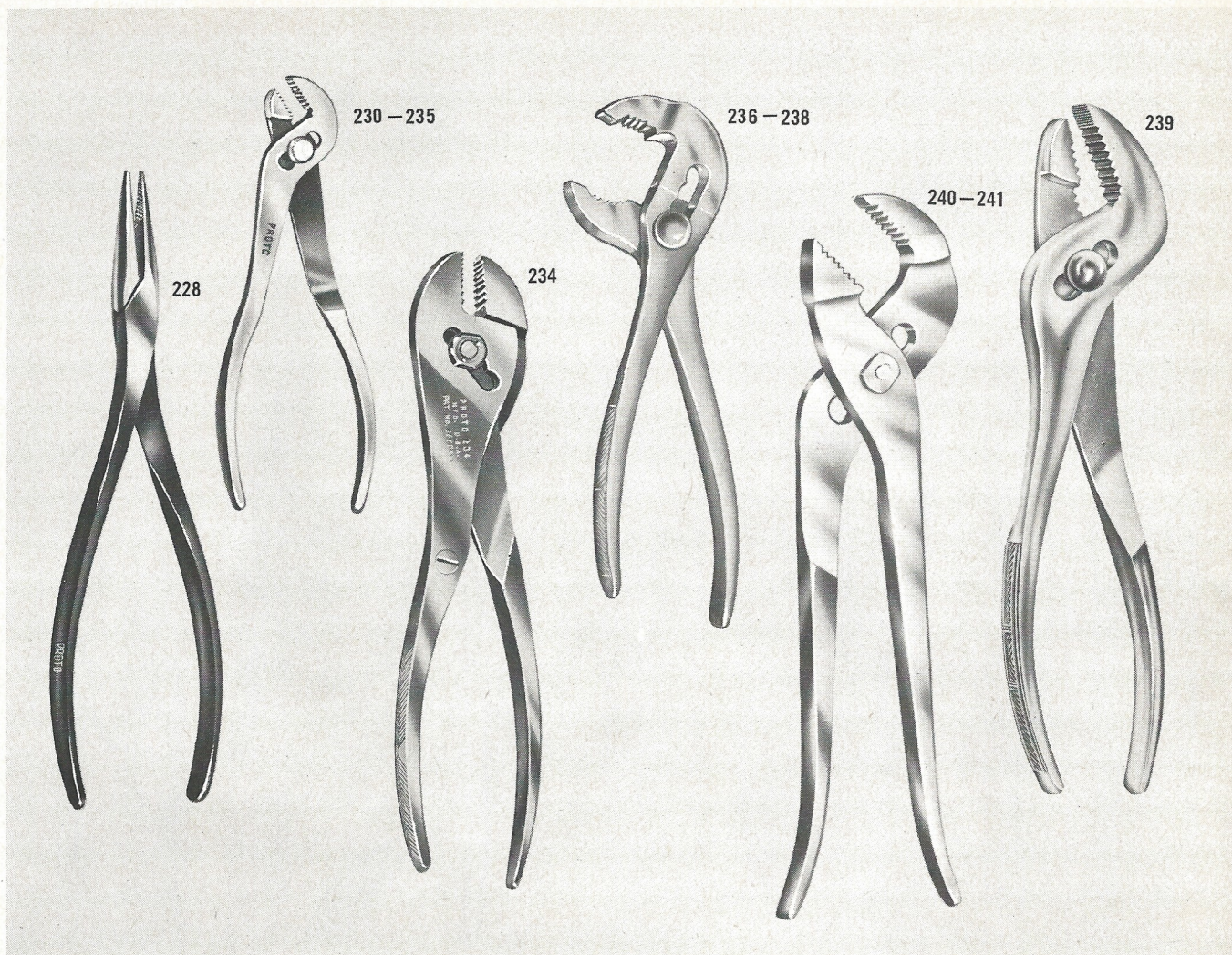
NO. 227 DUCKBILL PLIER

A useful plier for carburetor, radio, refrigerator, TV, office machine and many other types of work. Long handles provide powerful leverage. Jaws have versatile diamond knurled teeth for positive gripping.

227	7 3/4"	.37 Lb.	1 3/8"	9/16"	7/16"	—	1/8"
227G	7 3/4"	.46 Lb.	1 3/8"	9/16"	7/16"	—	1/8"

G—With "Handeze" Plastic Grips

PLIERS



Federal Specs.: GGG-P-471a. (Pliers & Nippers) GGG-P-00471b. (Pliers) GGG-N-00350. (Nippers) (For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.)

No. 228 LONG REACH NEEDLE NOSE PLIER

For drawing and looping wire, forming terminals, working in close quarters, and reaching way back into assemblies. Extra length is useful for repair and assembly of instruments, TV sets and other electrical equipment. Diamond knurled teeth permit pulling or side holding, grip, 1 3/8".

NO.	LENGTH	WEIGHT	A	B	C	D	E
228	7 3/4"	.37 Lb.	1 3/8"	7/16"	7/16"	---	5/64"
228G	7 3/4"	.51 Lb.	1 3/8"	7/16"	7/16"	---	5/64"

NOS. 230 & 235, MIDGET SLIP JOINT IGNITION PLIERS

Light and convenient to use. Designed for ignition work or other jobs requiring narrow jaws. Has three jaw opening adjustments. Protected from rust by Parco-Lubrite finish, (No. 230) or Chrome Plating (No. 235).

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
230	4 1/2"	.09 Lb.	7/16"	29/32"	3/16"	235-B & 235-N
235	4 1/2"	.09 Lb.	7/16"	29/32"	3/16"	235-B & 235-N

No. 234 "MULTI-PLIER"

"A chest of tools in one," this revolutionary plier is perfect for countless jobs, and is a "must" for all tool users. Patented, three-piece compound-leverage design multiplies applied pressure ten times! Non-slip jaws open to 1 1/4". Unique diagonal four-position slot gives closer, easier jaw adjustments, reduces wedge action and wear. Alloy steel. Chromed.

NO.	LENGTH	WEIGHT	A	B	C	SPARE SCREW AND NUT NO.
234	7 3/4"	.63 Lb.	1 1/16"	1 3/8"	7/16"	234-P Screw 240-N Nut

NOS. 236 & 238 PARROT NOSE WRENCH PLIERS

Combination plier and pipe wrench, with 75° offset nose. No. 236 has three jaw-opening adjustments and No. 238 has four adjustments. Noted for grip. Ideal for pipe and tubing work. Quality chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
236	6 1/4"	.42 Lb.	1 1/16"	2 1/16"	25/64"	202-B & 240-N
238	7 1/4"	.59 Lb.	1 1/8"	2 3/16"	7/16"	257-B & 240-N

No. 239 WRENCH PLIER

A popular type, with long slim 20° offset nose and three jaw-opening adjustments. Jaws hold objects in front of center, giving a powerful gripping action. Quality chrome plate.

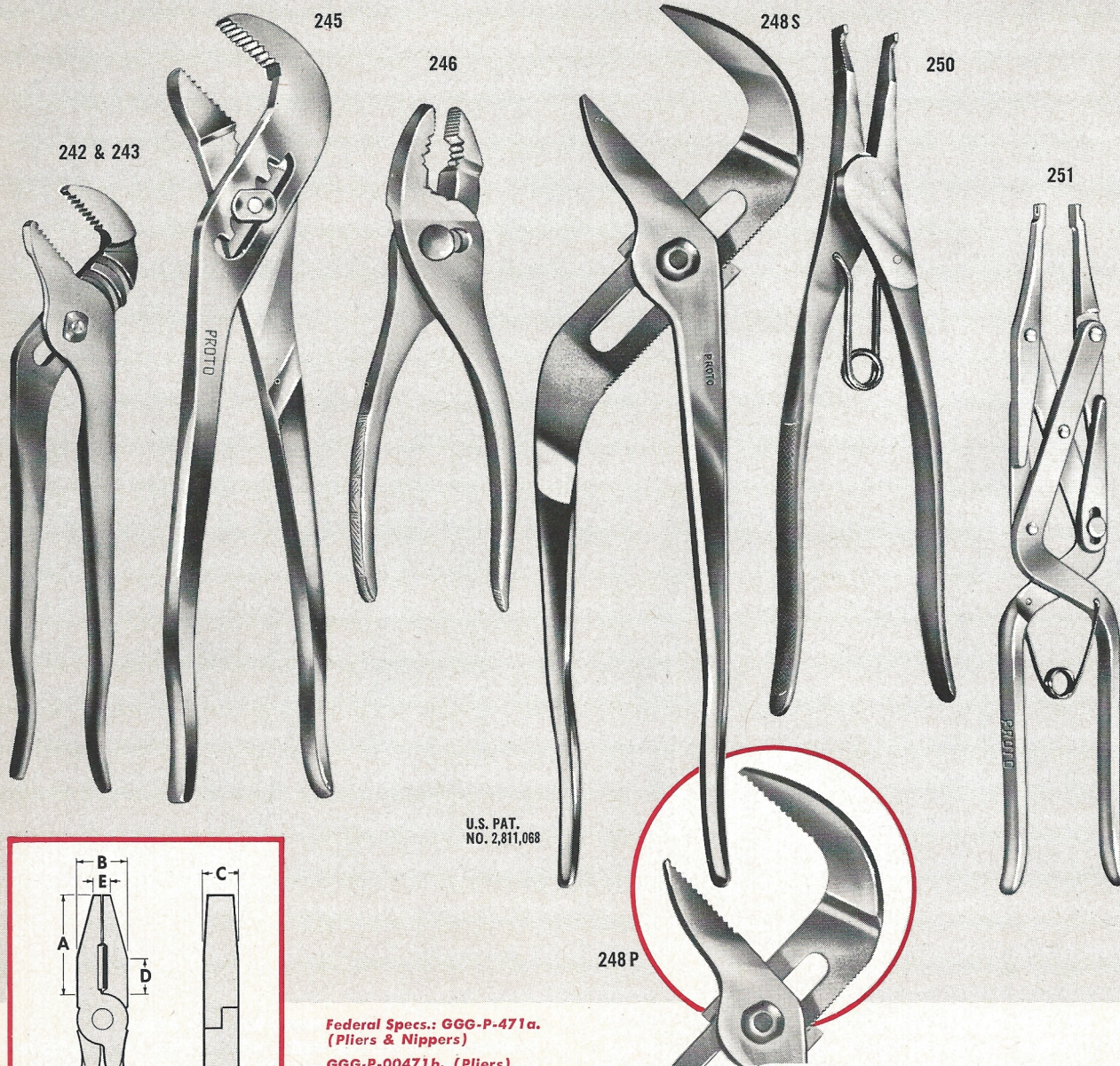
NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
239	8"	.56 Lb.	1 3/16"	2 3/16"	25/64"	202-B & 240-N

NOS. 240 & 241 GENERAL UTILITY PLIERS

All-purpose pliers, with five jaw-opening adjustments. Teeth are shaped as in a pipe wrench, insuring positive grip on round objects. Chromed.

NO.	TYPE DUTY	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
240	Heavy	9"	.57 Lb.	1 3/32"	2 1/32"	1 1/32"	240-B & 240-N
241	Light	9 1/2"	.57 Lb.	1 3/32"	2 1/16"	9/32"	241-B & 240-N

G—With "Handeze" Plastic Grips.



U.S. PAT.
NO. 2,811,068

Federal Specs.: GGG-P-471a.
(Pliers & Nippers)

GGG-P-00471b. (Pliers)
GGG-N-00350. (Nippers)

(For identification of
individual tools see "Proto
Conversion to Federal
Stock No's." Bulletin
No. 5918.)

NOS. 242 & 243 POWER TRACK PLIER

A curved tongue-and-groove joint holds jaws securely in any desired position and takes strain off bolt. Five grooves provide wide opening range for handling hundreds of jobs. Quality chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT & NUT NOS.
242	7 1/2"	.45 Lb.	3 1/32"	1 25/32"	2 3/4"	243-B & 243-N
243	10"	.75 Lb.	1 3/16"	2 5/32"	2 3/4"	243-B & 243-N

NO. 245 SELF-ENERGIZING GEAR-LOCK PLIER

A squeeze of the handles locks bolt in gear-type slot and jaw pressure increases. No binding or slipping. Slim jaws, 1 3/4" opening. Sharp pipe wrench teeth and powerful no-bend cutter. A revolutionary multi-purpose tool. Quality chrome plate.

245	9 1/2"	.75 Lb.	1 1/8"	2 3/16"	7/16"	245-B & 243-N
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NO. 246 COMB. SLIP JOINT CUTTING PLIER

A well-made plier that cuts most wire and nails easily. Two jaw-opening adjustments. Quality chrome plate.

246	6 1/2"	.46 Lb.	1 1/64"	1 1/4"	7/16"	257-B & 240-N
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NO. 248 SMOOTH JAW PLIER. NO. 248P PIPE JAW PLIER

Another sensational plier—with smooth jaws for protecting soft metal and decorative finish nuts from damage or with milled pipe jaws. A novel gear rack, with teeth 1/16" apart, permits 40 parallel jaw positions for securing maximum bearing surface on basin and other nuts up to 2 7/8". Cam pulls sliding wedge against teeth in rack, squeezing the extra long handles creates locking action.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT & NUT NOS.
248 S	11 1/4"	.92 Lb.	1 7/8"	2 27/32"	2 3/4"	248S-B & 243-N
248P	11 1/4"	.97 Lb.	1 7/8"	2 27/32"	2 3/4"	248S-B & 243-N

NO. 250 LOCK RING & "HORSESHOE" WASHER PLIER

A money-saving dual-purpose plier, for spreading both soft iron "horseshoe" lock washers used on brakes and tempered steel lock rings used on shafting to locate bearings, gears, etc.

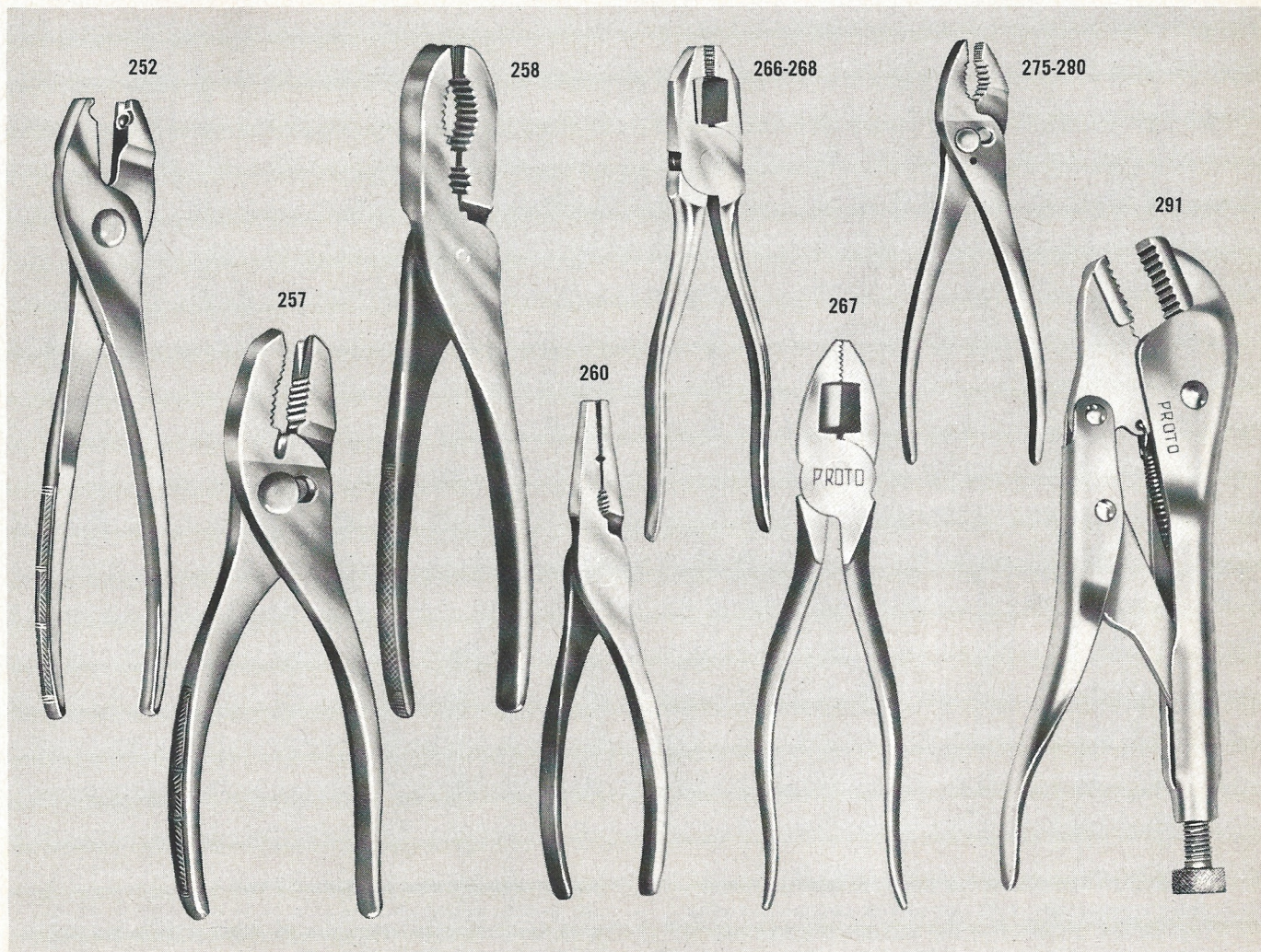
NO.	LENGTH	WEIGHT	A	B	C	SPARE SPRING NO.
250	8 1/4"	.40 Lb.	2 7/64"	2 7/32"	3/8"	250-S

NO. 251 PARALLEL JAW LOCK RING PLIER

Powerful compound leverage simplifies removal of lock or snap rings used on shafts to retain bearings. Jaw tip indentations hold two ends of ring, prevents breakage. Outside Jaw Spread 1 1/4". Chromed.

251	9 1/2"	.54 Lb.	3/16"	1 1/64"	3/16"	251-S
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PLIERS



Federal Specs.: GGG-P-471a. (Pliers & Nippers)
GGG-P-00471b. (Pliers) GGG-N-00350. (Nippers)
(For identification of individual tools see
"Proto Conversion to Federal stock No's." Bulletin No. 5918.)

NO. 252 CORBIN HOSE CLAMP PLIER

For installation and repair of Corbin spring tension clamps, used on hose connections for car water pumps and heaters. For appliances and other equipment using Corbin clamps. Two gripping positions engage ears, prevent hazard of clamp flying out of the plier. Chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	D	SPARE BOLT & NUT NOS.
252	7 3/4"	.50 Lb.	1 1/16"	1 5/16"	2 5/64"		202-B & 240-N

NO. 257 HEAVY-DUTY UNIVERSAL PLIER

A curved jaw grips objects of almost any shape. Other jaw is grooved for gripping wire, etc. Has a shear-type wire cutter and two-jaw-opening adjustments. Chrome plate.

257	7"	.55 Lb.	1 1/4"	1 5/16"	7/16"		257-B & 240-N
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NO. 258 GAS PLIER

Handles many sizes of studs, tubing and pipe. Jaws have two different sizes of concave openings—for either small or large diameter objects. Jaw ends have lengthwise tube-gripping teeth.

258	8 1/4"	.63 Lb.	2 3/32"	1 5/32"	2 5/64"		
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NO. 260 LONG THIN NOSE TELEPHONE PLIER

Popular for telephone work, radio installation and repair. Long thin nose for tight places. Shear-type wire cutter and stripper.

260	6 1/4"	.24 Lb.	1 1/32"	7/8"	2 1/64"		
260G	6 1/4"	.29 Lb.					

G—with "Handeze" Plastic Grips.

NOTE: For spare parts see page 75

NOS. 266 & 268 LINEMAN'S SIDE CUTTING PLIERS

For utility linemen's work, wiring and electrical equipment installation and maintenance. Carefully matched induction-hardened cutting edges. Useful around filling stations, garages. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C	D
266	6 1/2"	.40 Lb.	1 1/16"	2 7/32"	7/16"	5/8"
266G	6 1/2"	.50 Lb.	1 1/16"	2 7/32"	7/16"	5/8"
268	8 1/2"	.82 Lb.	1 7/16"	1 15/64"	5/8"	23/32"
268G	8 1/2"	.91 Lb.	1 7/16"	1 15/64"	5/8"	23/32"

G—with "Handeze" Plastic Grips.

NO. 267 NEW ENGLAND STYLE LINEMAN'S PLIER

Heavy-duty type, powerful cutters. Slim-nosed for greater accessibility to restricted spaces. Induction hardened. Handles are comfortably shaped. Quality Alloy.

267	7 1/4"	.59 Lb.	1 5/16"	1 1/8"	1/2"	43/64"
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NOS. 275 - 276 - 278 - 280 SLIP JOINT PLIERS

Leaders for general utility, design and service. Have two jaw-opening adjustments and a shear-type wire cutter. Four sizes. Chrome plate.

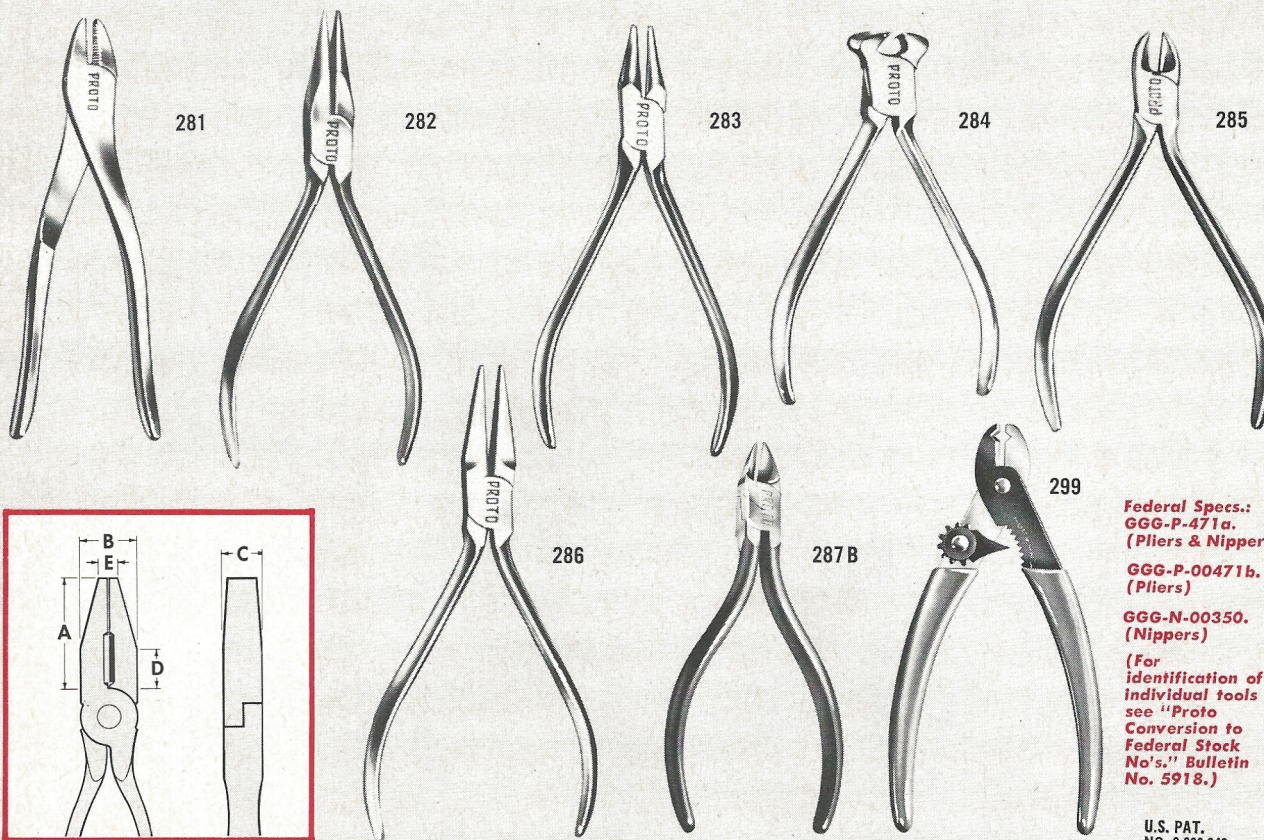
NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT NOS.	SPARE NUT NOS.
275	5 1/2"	.26 Lb.	1 1/16"	1 1/16"	1 1/32"	240-B	240-N
276	6 1/2"	.36 Lb.	2 9/32"	1 1/8"	1 3/32"	202-B	240-N
278	8"	.49 Lb.	1 5/16"	1 3/16"	1 3/32"	202-B	240-N
280	10"	.89 Lb.	1 25/64"	1 7/16"	1 1/2"	280-B	280-N

NO. 291 LEVER WRENCH PLIER

Four tools in one—a powerful hand vise, clamp, pipe wrench and plier. Lever action locks jaws in holding position with pressure up to 1 ton. Compact design, capacity of 1 1/2". Chrome plate.

NO	CAPACITY	LENGTH	WEIGHT
291	1 1/2"	8"	.94 Lb.

MIGHTY MIDGET ELECTRONIC PLIERS



Federal Specs.:
GGG-P-471a.
(Pliers & Nippers)
GGG-P-00471b.
(Pliers)
GGG-N-00350.
(Nippers)
(For
identification of
individual tools
see "Proto
Conversion to
Federal Stock
No's." Bulletin
No. 5918.)

U.S. PAT.
 NO. 2,868,049

These matched pliers, designed for television and radio service men, electronics and communications technicians, automotive and aviation mechanics, hobbyists and many others, speed precision work on small objects in tight places. Comfortable, wide-opening handles provide high leverage, fit snugly into the hand, and have good "feel."

- * "B" indicates Parco-Lubrite Finish.
- "P" indicates Full Polish—as shown above without "P" suffix.
- "G" indicates "Handeze" Plastic Grips.
- "S" indicates Coil Spring.

More than one letter indicates combination.

NO. 281 MIDGET STRAIGHT NOSE PLIER

Slim, tapered jaws reach into narrow places. Sharp milled teeth assure good grip on smallest objects.

NO.	LENGTH	WEIGHT	A	B	C	D
281P*/281B*	4 1/2"	.09 Lb.	1 7/32"	7/16"	3/16"	
281G*	4 1/2"		1 7/32"	7/16"	3/16"	

NO. 282 MIDGET CHAIN NOSE PLIER

Narrow tapered jaws with flat inside surfaces hold, bend and pull in close quarters. Coil spring adds extra speed to precision work.

NO.	LENGTH	WEIGHT	A	B	C	E	SPRING NO.
282B*/282P*	4 3/4"	.11 Lb.	1 1/8"	7/16"	1/4"	1/16"	285S-S
282BS*	4 3/4"		1 1/8"	7/16"	1/4"	1/16"	
282G*	4 3/4"		1 1/8"	7/16"	1/4"	1/16"	

NO. 283 MIDGET ROUND NOSE PLIER

Both jaws are rounded with a small surface and form very accurate rings, loops and bends on soft wire. Spring aids precision work in small areas.

283B*/283P*	4 1/2"	.10 Lb.	1 3/16"	2 7/64"	1/4"		285S-S
283BS*	4 1/2"						
283G*	4 1/2"	.11 Lb.					

NO. 284 MIDGET END CUTTING NIPPER

Has necessary leverage and sharp, induction-hardened edges for cutting small wires, connectors, bolts, rivets, etc., close to the surface. Coil spring speeds work. Quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C	D	SPRING NO.
284B*/284P*	4"	.11 Lb.	5/16"	3 9/64"	9/32"	3 3/64"	285S-S
284BS*	4"						
284G*		.12 Lb.					

NO. 285 MIDGET DIAGONAL CUTTING PLIER

Sharp, induction-hardened edges easily cut all types of small wire, coils, etc. Narrow jaws get into tight places.

285B*/285P*	4"	.10 Lb.	1 5/32"	1 3/32"	1/4"	1 5/32"	285S-S
285BS*							
285G*		.12 Lb.					

NO. 286 MIDGET FLAT NOSE PLIER

Flat narrow jaws get into restricted areas, provide good grip for holding and bending flat stock. Coil spring provides quick release desirable in fine work.

286B*/286P*	4 3/4"	.11 Lb.	1 1/8"	7/16"	1/4"		285S-S
286BS*							
286G*		.12 Lb.					

NO. 287B, BS, MIDGET FLUSH CUTTING DIAGONAL PLIER

Light rugged plier has streamlined jaws for greater access to, and quick flush cutting in confined areas.

NO.	LENGTH	WEIGHT	SPRING NO.
287B*	4"	.10 Lb.	.....
287BS*	4"		285S-S

NO. 299 WIRE STRIPPER

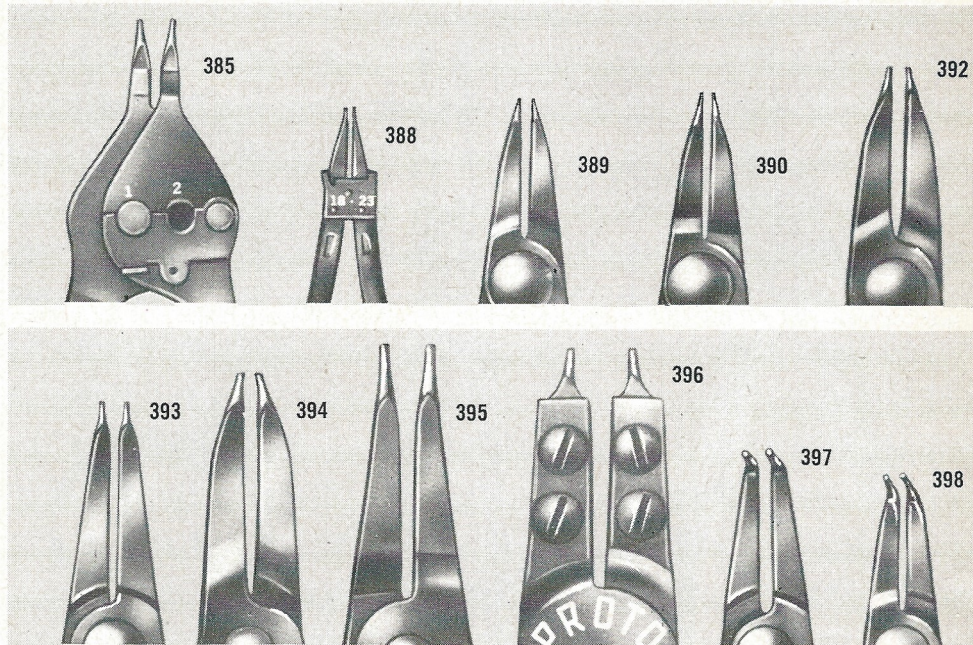
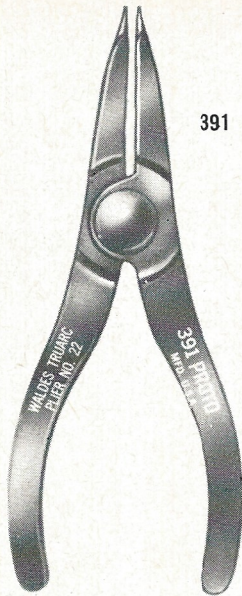
V notches nick insulation for clean, fast stripping of wire. Face ground edges cut soft wire up to No. 14 gauge. With comfortable plastic grips.

299	5"	.10 Lb.	— — — —
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NOTE: For spare parts see page 75

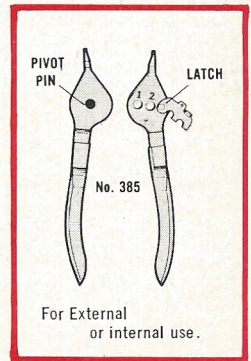
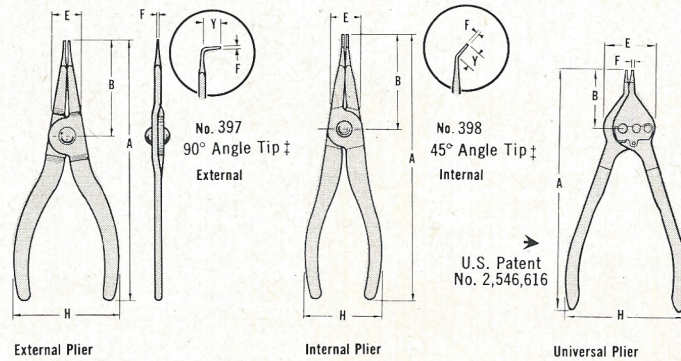
PROTO TRUARC* RETAINING RING PLIERS

*Registered trademark of Waldes Kohinoor Inc. *



12 PROTO models handle rings on shafts up to 4" and bores 1/4" to 7" dia. with correct plier sizes to hold firmer, prevent ring damage, reduce danger from flying rings. Permanent can't-lose tips are precision ground, induction hardened, correctly angled, insuring faster, trouble-free work.

Fedl. Specs.: GGG-P-00480
(See "Proto Conversions to Fedl. Stock No's." Bulletin No. 5918.)
(Fed. Specs. apply to all pliers except 385)



★ To obtain the right plier, simply measure the diameter of the shaft or bore where the ring is found, and refer to this table.

	PLIER NO.	SHAFT DIAM. RANGE	BORE DIAM. RANGE	A (TOL.)	B (TOL.)	E§ (TOL.)	F (TOL.)	H§ (TOL.)	WEIGHT LBS.
EXTERNAL	388†	0 - 3/16"		5 1/4	1 1/8 ± 1/16	1/2 ± 1/16	.023 ± .003	1 5/8 ± 1/8	.0383
	391	1/4" - 7/8"		5 11/16	2 1/8 ± 1/8	7/8 ± 1/8	.038 ± .003	2 5/16 ± 1/4	.1515
	393	1 5/16" - 1 7/16"		6 13/16	2 3/8 ± 1/8	7/8 ± 1/8	.070 ± .002	2 5/8 ± 1/4	.2002
	395	1 1/2" - 4"		9 1/8	3 ± 1/8	1 1/8 ± 1/8	.115 ± .005	4 ± 1/4	.488
	397*	1/4" - 7/8"		5 11/16	2 3/16 ± 1/8	7/8 ± 1/8	.038 ± .003	2 5/16 ± 1/4	.1562
INTERNAL	385		3/8" - 1"	5 7/16 ± 1/8	1 7/8 ± 1/8	1 3/16 ± 1/8	.038 ± .002	1 11/16 ± 1/4	.1405
	390		1/4" - 5/16"	5 7/16 ± 1/8	1 7/8 ± 1/8	1 3/16 ± 1/8	.022 ± .002	1 11/16 ± 1/4	.1405
	392		1 1/16" - 2"	6 9/16 ± 1/8	2 1/8 ± 1/8	7/8 ± 1/8	.070 ± .002	2 ± 1/4	.1962
	394		2 1/16" - 4"	8 7/8 ± 1/8	2 11/16 ± 1/8	1 1/8 ± 1/8	.090 ± .005	2 5/8 ± 1/4	.4195
	396		4" - 7"	16 ± 1/4	3 1/2 ± 1/4	1 3/4 ± 1/4	.120 ± .005	3 7/8 ± 1/4	1.500
	398**		3/8" - 1"	5 1/4 ± 1/8	1 23/32 ± 1/8	1 3/16 ± 1/8	.038 ± .002	1 11/16 ± 1/4	.1405
UNIV.	385	1 5/16" - 1 7/16"	1 1/16" - 2"	7 7/8 ± 1/4	1 7/8 ± 1/8	1 11/16 ± 1/8	.070 ± .002	3 15/16 ± 1/4	.344

†U.S. Patent No. 2,901,817. ‡Y—max. 5/16, min. 1/4 *90° Angle Tip. **45° Angle Tip. §For Universal Plier, dimensions are for: External Position Internal Position

If Truarc ring numbers are known, the right plier may be ordered by referring to this table. EXAMPLE: For External rings 5100-18 thru 5100-23, the correct plier is No. 388.

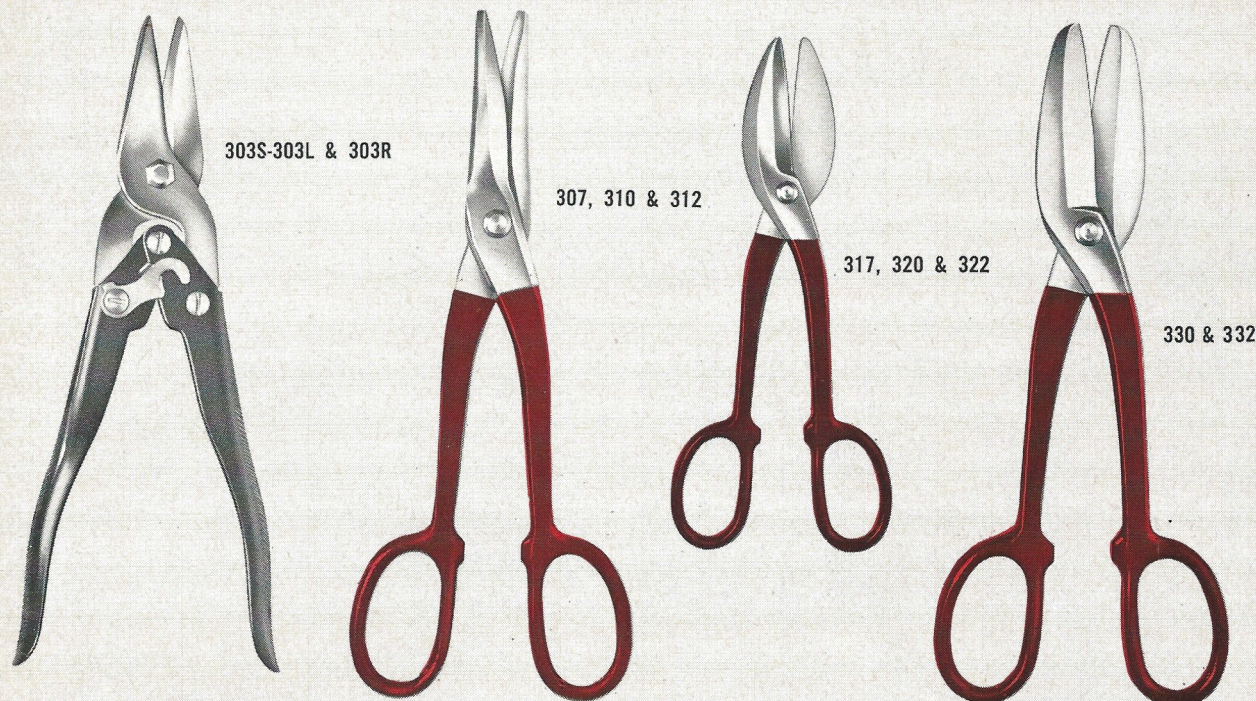
EXTERNAL								INTERNAL															
TRUARC RING TYPES		SERIES 5100 5101 5102				SERIES 5108 5108				SERIES 5000 5001 5002								SERIES 5008 5008					
Series	-18	-25	-93	-150	-50	-106	-215	-100	-106	-181	-350	-25	-37	-156	-175	-281	-287	-315	-334	-75	-143	-206	-315
Dash No.	-23	-87	-143	-350	-100	-200	-334	-102	-175	-350	-650	-31	-93							-137	-200	-300	-400
Pliers No.	388	391	393	395	391	393	395	389	392	394	396	390	389		392	394	396			389	392	394	396
		397	385		397	385		398	385				398		385					398	385		

Note: Series Dash Numbers are in hundredths of inches. Thus, 5100-25 identifies External Ring Series 5100 for a shaft of approximately 0.25" O.D.

Other types and sizes of pliers can be obtained through Proto's Contract Department.

ALL-PURPOSE SNIPS

Fedl. Specs.: GGG-S-291c



Eleven styles and sizes fill needs of industries, mechanics, craftsmen, farmers and home owners. They cut steel, tin, sheet metals, wire, linoleum, canvas, gaskets, roofing, rubber, twine, leather, cardboard, shrubs, flowers and hundreds of other items. Scientifically designed, they give smooth, fast,

accurate cuts with little effort, and produce better finished work, clean and unbent. Blades of special steel are hot drop forged for great strength and toughness. Electrically controlled heat treating and tempering give the blades in each snip the same hardness, essential for proper operation and long life.

303S, 303L, & 303R—Aviation type straight cut, left cut and right cut multiple-leverage—for intricate cutting. Compound action greatly increases power.

307, 310 & 312—Duckbill or circular snips—for cutting circles and other odd designs. Blades hollow ground for better work.

317, 320 & 322—Straight or regular snips—handy for shops, farms, homes. Streamlined with graceful curves, rounded edges.

330 & 332—Combination snips—for straight and moderately irregular cuts.

NO.	DESCRIPTION	OVERALL LENGTH	LENGTH OF CUT	WT. LBS.
303L	Multi-Leverage, Left Cut	9 1/16"	1 7/16"	.71
303R	Multi-Leverage, Right Cut	9 1/16"	1 7/16"	.71
303S	Multi-Levrg., Straight Cut	9 7/8"	1 5/8"	.71
307	Duckbill or Circular	7"	1 3/4"	.41
310	Duckbill or Circular	10"	2 1/2"	.88
312	Duckbill or Circular	12 3/4"	3"	1.56
317	Straight or Regular	7"	1 3/4"	.42
320	Straight or Regular	10"	2 1/2"	.98
322	Straight or Regular	12 3/4"	3"	1.47
330	Combination Pattern	10"	2 1/2"	.82
332	Combination Pattern	12 3/4"	3"	1.46

HACKSAWS

Fedl. Specs.: GGG-F-671

NO. 344 LOW-CLEARANCE HACKSAW

For use where a high frame won't work. Sturdy. Takes 10" blades. Weight, .70 Lb.

NO. 352 ADJUSTABLE HACKSAW

A heavy-duty polished and plated frame with many fine features. Pistol-grip handle, of durable red plastic, is at an angle and shaped to fit the hand. Takes 8", 10" or 12" blades, which can be set in four different positions. Weight, 1.72 Lbs.

NO. 360 ADJUSTABLE HACKSAW

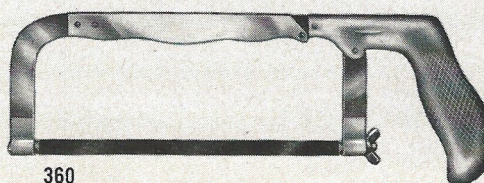
Inexpensive, but sturdy and serviceable. Pistol grip handle. Weight, 1.22 Lbs.



344

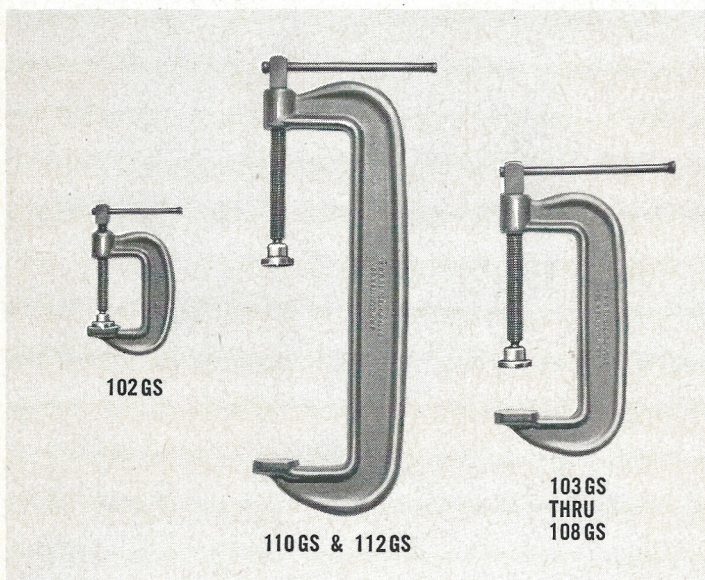
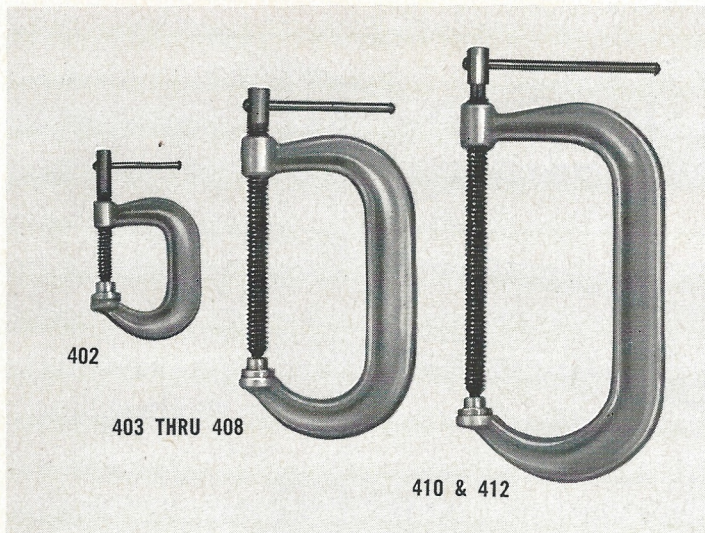


352



360

C-CLAMPS



Forged and scientifically heat treated from selected steel. Extra heavy threads increase spindle strength under pressure. Adjustable handle. Light oil finish.

REGULAR DUTY C-CLAMPS with Perma-Pad Extra Deep Throat

Federal Spec. GGG-C-406a

See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NO.	CAPACITY	THROAT DEPTH*	SPINDLE DIAMETER	WEIGHT EACH
402	0"- 2"	2"	1/2"	1 Lb.
†402S	0"- 2"	2"	1/2"	1 Lb.
403	0"- 3"	2 1/2"	5/8"	2 Lb.
†403S	0"- 3"	2 1/2"	5/8"	2 Lb.
404	0"- 4"	2 7/8"	3/4"	3 Lb.
†404S	0"- 4"	2 7/8"	3/4"	3 Lb.
406	0"- 6"	3 5/8"	3/4"	4 Lb.
†406S	0"- 6"	3 5/8"	3/4"	4 Lb.
408	0"- 8"	4 1/2"	3/4"	6 Lb.
†408S	0"- 8"	4 1/2"	3/4"	6 Lb.
410	2"- 10"	5 3/8"	3/4"	9 Lb.
†410S	2"- 10"	5 3/8"	3/4"	9 Lb.
412	2"- 12"	5 3/4"	7/8"	13 Lb.
†412S	2"- 12"	5 3/4"	7/8"	13 Lb.

† SPATTER-RESISTANT—CADMIUM PLATED. For use in welding operations.

* From center of screw.

GENERAL SERVICE C-CLAMPS with Perma-Pad

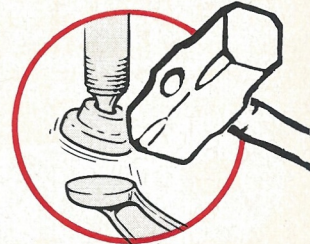
Federal Spec. GGG-C-406a

NO.	CAPACITY	THROAT DEPTH*	SPINDLE DIAMETER	WEIGHT EACH
102GS	0"- 2"	1 1/2"	9/16"	1.5
103GS	0"- 3"	2"	5/8"	2.5
104GS	0"- 4"	2 3/8"	3/4"	4.5
106GS	2"- 6"	2 1/2"	3/4"	5.5
108GS	4"- 8"	2 5/8"	3/4"	7.0
110GS	6"- 10"	2 3/4"	3/4"	7.5
112GS	8"- 12"	2 7/8"	3/4"	9.5

*From center of screw.

PROTO PERMA-PAD®

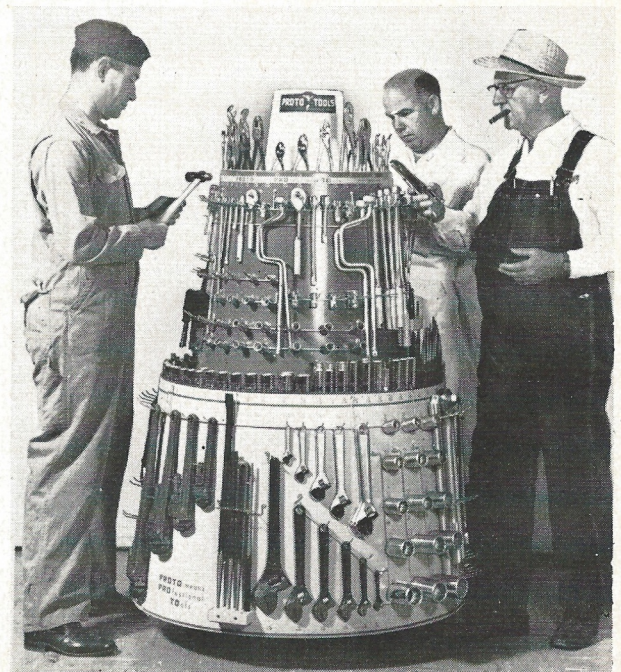
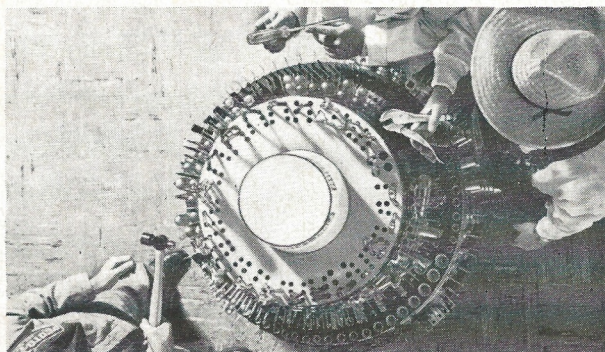
This pad was battered twenty times with a 5 lb. sledge. It's scarred, but still usable . . . hasn't lost the pad . . . and still retains free motion through a 60° arc!



LOOK FOR THESE

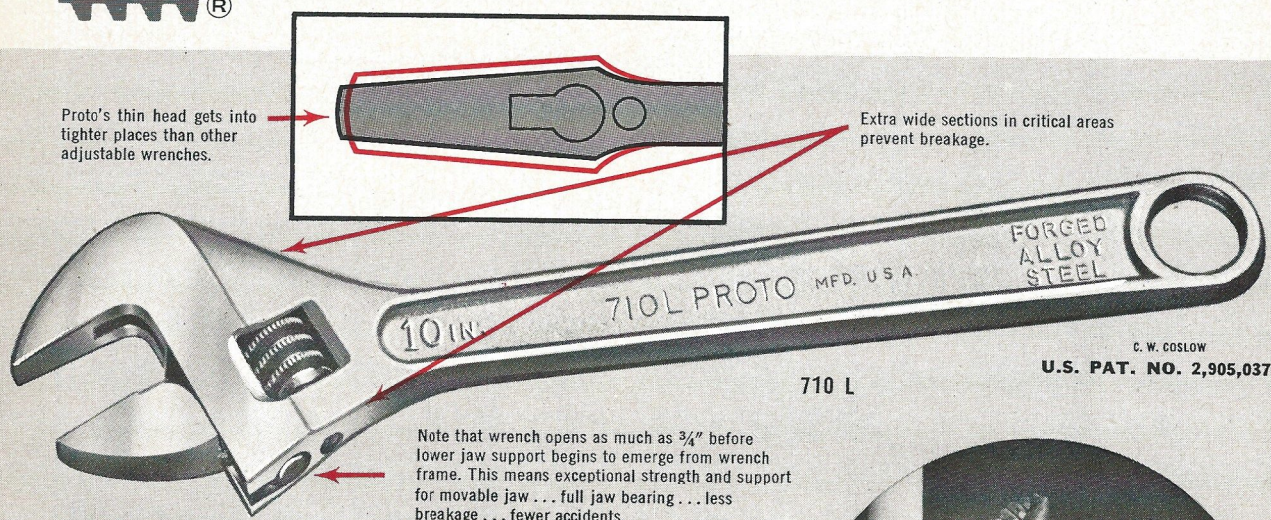
PROTO TOOLMART DISPLAYS

Self-service displays like this make it possible for your dealer to put PROTO TOOLS out where you can see and feel their quality and find the type and size you want. The SD-11 SUPERMART shown here displays 313 different tools, with the number and size of each tool printed large and easy to read.





ADJUSTABLE WRENCHES

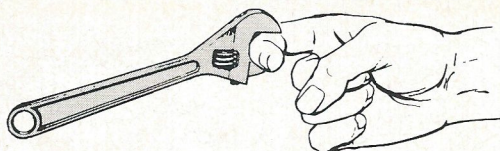


THE CLIK-STOP LOCKS AUTOMATICALLY

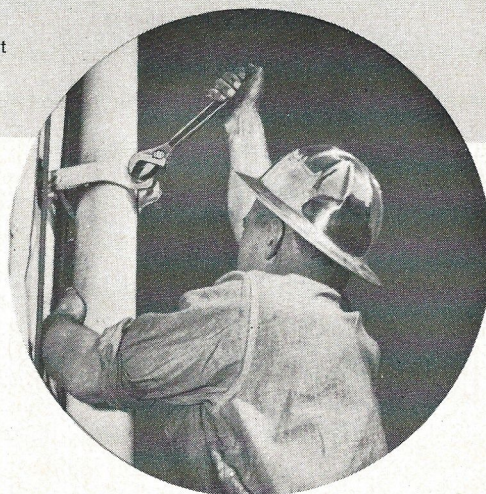
It stays locked, exactly where you set it. Pressure on the handle keeps it locked, automatically. When you lay the CLIK-STOP down its opening size doesn't change. You don't have to keep resetting it every time you go back to the same size fitting. Yet when there's no pressure on the handle CLIK-STOP'S golden knurl turns easily to any exact opening size. There are no buttons or gadgets to push. The harder you pull, the tighter it locks, *automatically*. That's why CLIK-STOP is the safest to use, protects you from skinned knuckles and serious accidents. Chrome or Black Industrial finish.

TRY THIS LOCK TEST

Tighten the CLIK-STOP on your finger. Try to turn the golden knurl. You can't. The weight of the handle alone keeps it locked.



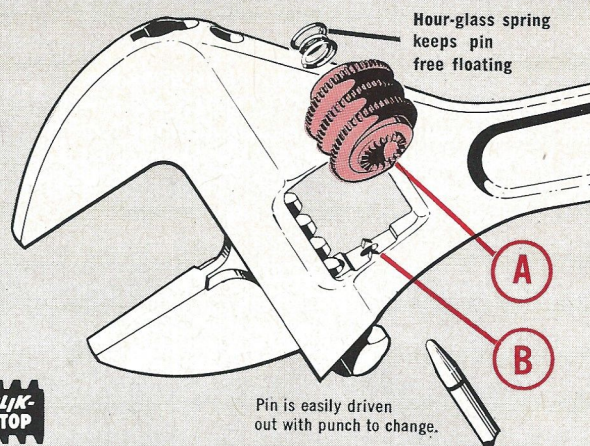
NOTE:
For spare parts
see page 75.



Safety Engineers and Insurance Inspectors note:

Not only does the locking action become more positive as the user pulls harder on the wrench, but Clik-Stop's AUTOMATIC locking feature means that the user is protected EVERY TIME he uses the wrench, not just when he happens to think of locking the wrench as is the case with most every other locking device for adjustable wrenches. This extra safety built into the Clik-Stop makes it a faster, safer, professional tool.

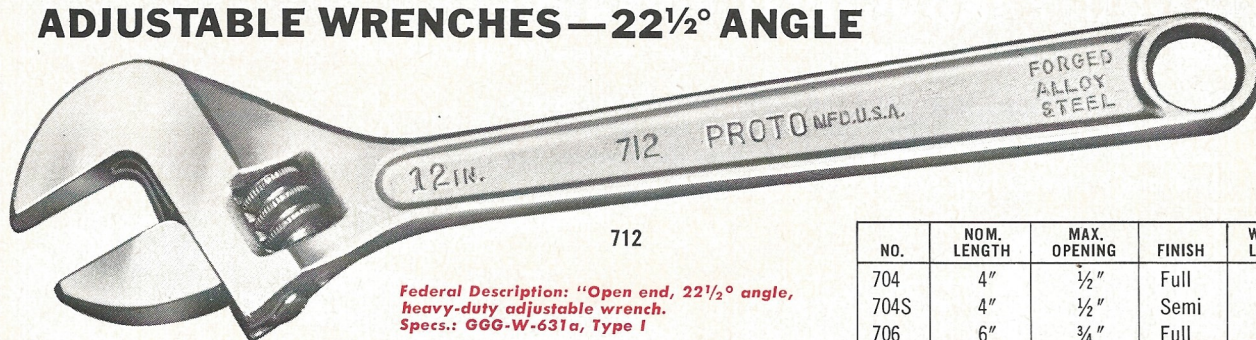
NO.	LENGTH	MAXIMUM OPENING	FINISH	WT., LBS.
704L	4"	1/2"	Full	.10
704SL	4"	1/2"	Black Industrial	.10
706L	6"	3/4"	Full	.23
706SL	6"	3/4"	Black Industrial	.23
708L	8"	1 1/16"	Full	.54
708SL	8"	1 1/16"	Black Industrial	.54
710L	10"	1 1/8"	Full	.85
710SL	10"	1 1/8"	Black Industrial	.85
712L	12"	1 5/16"	Full	1.56
712SL	12"	1 5/16"	Black Industrial	1.56
715L	15"	1 11/16"	Full	3.25
715SL	15"	1 11/16"	Black Industrial	3.25
716L	16"	1 7/8"	Full	3.7
716SL	16"	1 7/8"	Black Industrial	3.7
720L	20"	2 1/2"	Full	6.3
720SL	20"	2 1/2"	Black Industrial	6.3



PROTO LOCKING FEATURE

Grooves (A) in spring-loaded knurl mesh with teeth (B) in wrench body to hold exact jaw openings. Pressure on lower jaw, when in use, pulls down on knurl, automatically locking teeth still tighter.

ADJUSTABLE WRENCHES—22½° ANGLE



Federal Description: "Open end, 22½° angle, heavy-duty adjustable wrench."
Specs.: GGG-W-631a, Type I

Forged from fine alloy steel, these wrenches are strong—though thin and light to permit faster work. The seven full-finish wrenches are highly polished and then chrome plated to prevent rust and enhance appearance. The seven semi-finish wrenches have polished heads and back. Absence of a corner lip on the movable jaw (in most sizes) allows a square nut to fit flat against the inside jaw surface, resulting in greater strength and better adaptability to different size nuts. Every handle uses a husky I-beam construction and has a hole for hanging up the wrench.

NOTE: For detailed description of exclusive features of this wrench and of Proto's Klik-Stop, the automatic-locking adjustable wrench, see page 16.

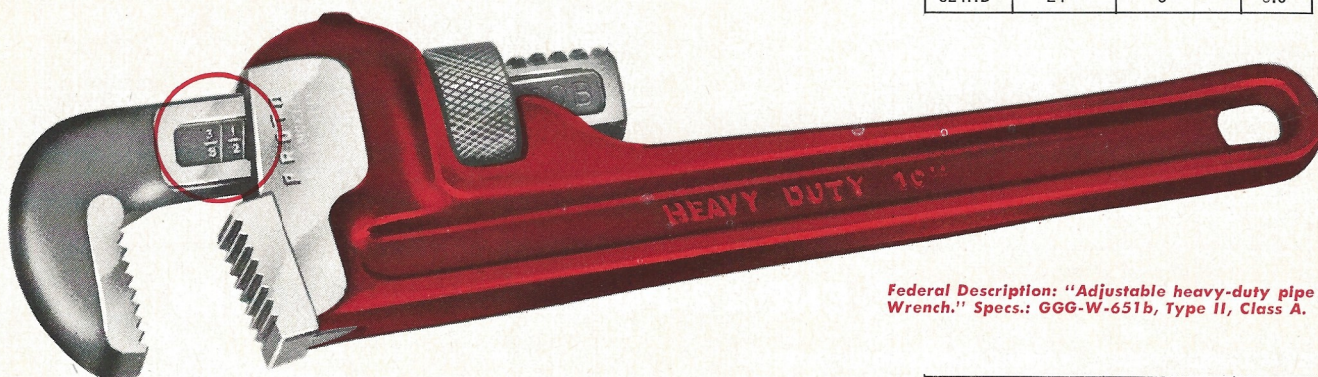
NO.	NOM. LENGTH	MAX. OPENING	FINISH	WT., LBS.
704	4"	½"	Full	.10
704S	4"	½"	Semi	.10
706	6"	¾"	Full	.23
706S	6"	¾"	Semi	.23
708	8"	1⅛"	Full	.54
708S	8"	1⅛"	Semi	.54
710	10"	1⅜"	Full	.85
710S	10"	1⅜"	Semi	.85
712	12"	1⅝"	Full	1.56
712S	12"	1⅝"	Semi	1.56
715	15"	1⅞"	Full	3.25
715S	15"	1⅞"	Semi	3.25
716	16"	1⅞"	Full	3.68
716S	16"	1⅞"	Semi	3.68
720	20"	2½"	Full	6.26
720S	20"	2½"	Semi	6.26

NOTE: For spare parts see page 75

PIPE WRENCHES

HEAVY-DUTY TYPE

Rugged design, engineered for light weight and good balance. Features include heat-treated, precision milled teeth, replaceable lower jaw recessed into frame to prevent shearing of pin under extreme loads; pipe sizes on forged hook jaw, I-beam handle of alloy ductile iron, and alloy steel jaws.

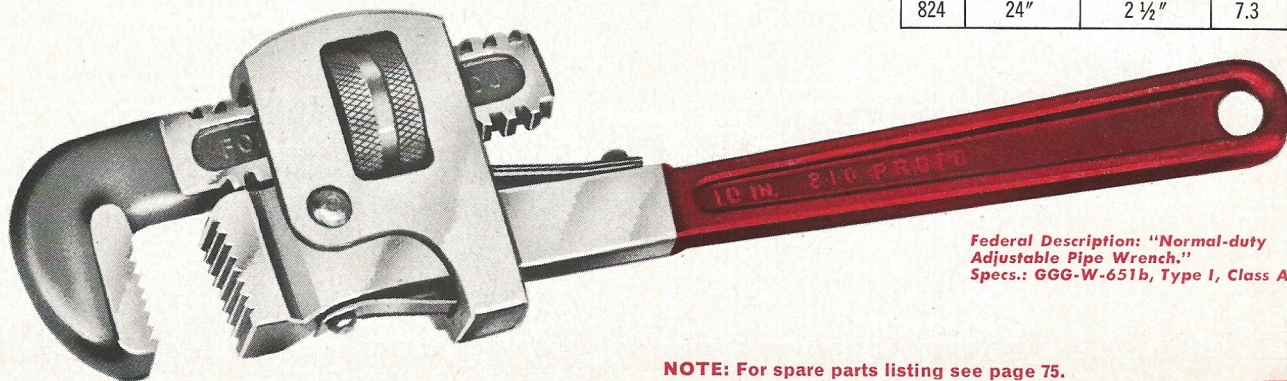


Federal Description: "Adjustable heavy-duty pipe Wrench." **Specs.:** GGG-W-651b, Type II, Class A.

NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806HD	6"	¾"	.45
808HD	8"	1"	.85
810HD	10"	1½"	1.80
814HD	14"	2"	3.5
818HD	18"	2½"	5.8
824HD	24"	3"	9.6

NORMAL-DUTY STILLSON-PATTERN

Strength far exceeds Government normal-duty specifications. Have forged and heat-treated special steel handle of panel I-beam type, strengthened strain points, an easy-turning knurl, and hard, tough jaw teeth that are deep-milled for positive grip.



Federal Description: "Normal-duty Adjustable Pipe Wrench." **Specs.:** GGG-W-651b, Type I, Class A.

NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806	6"	½"	.32
808	8"	¾"	.65
810	10"	1"	1.38
814	14"	1½"	2.6
818	18"	2"	4.1
824	24"	2½"	7.3

NOTE: For spare parts listing see page 75.

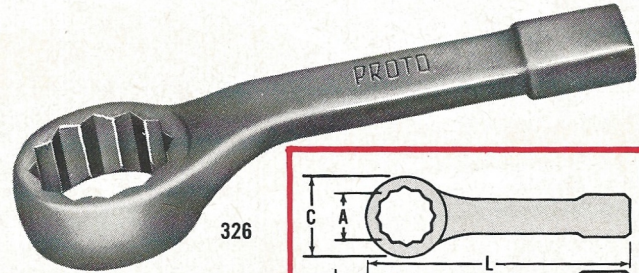
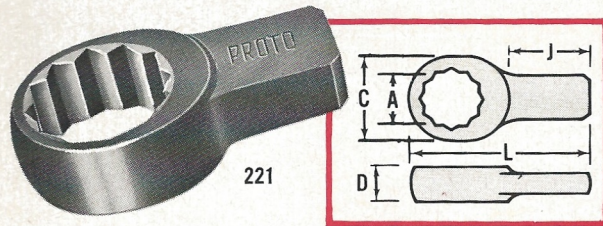
HEAVY-DUTY INDUSTRIAL WRENCHES

Slugging Wrenches—12-Point Box Type

For all types of heavy installation and repair work where space is restricted. Opening fits snugly upon bolt or nut and remains in position when struck with heavy sledge. Forged from special alloy steel and protected from rust by Parco-Lubrite finish.



Fedl. Description: "Slugging Wrench, 12-Point Box, Short (or Long)." Specs.: GGG-W-636a, Type XI, Style A (Nos. USN221-274) and Style B (Nos. USN326-374).



Additional Sizes Can Be Made on Special Order.

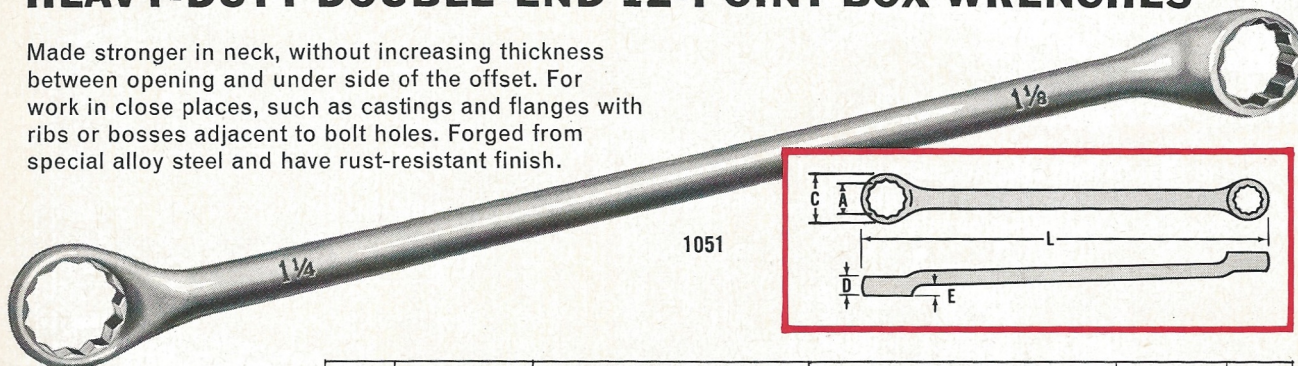
NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THKNS. (D)	SHANK LGTH. (J)	TOTAL LGTH. (L)	WT., LBS.
USN221	1 5/16"	2.44"	.88"	3.25"	6 1/4"	1.84
USN223	1 7/16"	2.44"	.88"	3.25"	6 1/4"	1.80
USN224	1 1/2"	2.44"	.88"	3.25"	6 1/4"	1.76
USN226	1 5/8"	2.94"	1.13"	3.75"	7 1/8"	3.3
USN227	1 11/16"	2.94"	1.13"	3.75"	7 1/8"	3.3
USN229	1 13/16"	2.94"	1.13"	3.75"	7 1/8"	3.2
USN230	1 7/8"	2.94"	1.13"	3.75"	7 1/8"	3.0
USN232	2"	3.59"	1.38"	3.75"	7 1/2"	5.0
USN235	2 3/16"	3.59"	1.38"	3.75"	7 1/2"	4.7
USN236	2 1/4"	3.59"	1.38"	3.75"	7 1/2"	4.7
USN238	2 3/8"	4.25"	1.63"	3.87"	8 1/2"	8.0
USN241	2 1/2"	4.25"	1.63"	3.87"	8 1/2"	7.6
USN242	2 5/8"	4.25"	1.63"	3.87"	8 1/2"	7.7
USN244	2 3/4"	4.69"	1.88"	4.50"	9 1/2"	12
USN247	2 15/16"	4.69"	1.88"	4.50"	9 1/2"	12
USN248	3"	4.69"	1.88"	4.50"	9 1/2"	11
USN250	3 1/8"	4.69"	1.88"	4.50"	9 1/2"	11
USN254	3 3/8"	5.63"	2.00"	4.00"	10 3/8"	14
USN256	3 1/2"	5.63"	2.00"	4.00"	10 3/8"	14
USN260	3 3/4"	6.25"	2.25"	4.25"	11"	20
USN262	3 7/8"	6.25"	2.25"	4.25"	11"	19
USN266	4 1/8"	6.66"	2.38"	4.00"	11 7/16"	22
USN268	4 1/4"	6.66"	2.38"	4.00"	11 7/16"	22
USN272	4 1/2"	7.19"	2.75"	4.25"	12"	28
USN274	4 5/8"	7.19"	2.75"	4.25"	12"	27

NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THKNS. (D)	HEAD OFFSET (E)	TOTAL LENGTH (L)	WT., LBS.
USN326	1 5/8"	2.75"	1.13"	1.00"	10 1/8"	3.2
USN327	1 11/16"	2.75"	1.13"	1.00"	10 1/8"	3.1
USN329	1 13/16"	2.75"	1.13"	1.00"	10 1/8"	3.0
USN330	1 7/8"	3.00"	1.25"	1.12"	10 3/4"	4.0
USN332	2"	3.00"	1.25"	1.12"	10 3/4"	3.8
USN335	2 3/16"	3.56"	1.38"	1.25"	11"	5.0
USN336	2 1/4"	3.56"	1.38"	1.25"	11"	4.9
USN338	2 3/8"	4.13"	1.63"	1.50"	14 1/2"	8.6
USN341	2 1/2"	4.13"	1.63"	1.50"	14 1/2"	8.3
USN342	2 5/8"	4.13"	1.63"	1.50"	14 1/2"	8.0
USN344	2 3/4"	4.13"	1.63"	1.50"	14 1/2"	7.7
USN348	3"	4.63"	1.88"	1.75"	15 3/4"	12
USN350	3 1/8"	4.63"	1.88"	1.75"	15 3/4"	11
USN354	3 3/8"	5.25"	2.00"	1.87"	17 3/8"	16
USN356	3 1/2"	5.25"	2.00"	1.87"	17 3/8"	15
USN366	4 1/8"	6.13"	2.88"	2.25"	16"	26
USN368	4 1/4"	6.13"	2.88"	2.25"	18"	25
USN372	4 1/2"	6.63"	3.00"	0.00"	19 3/4"	34
USN374	4 5/8"	6.63"	3.00"	0.00"	19 3/4"	33

NOTE: See page 27 for other heavy duty wrenches.

HEAVY-DUTY DOUBLE-END 12-POINT BOX WRENCHES

Made stronger in neck, without increasing thickness between opening and under side of the offset. For work in close places, such as castings and flanges with ribs or bosses adjacent to bolt holes. Forged from special alloy steel and have rust-resistant finish.



NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH (L)	WT., LBS.
		HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)	HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)		
1051	1 1/16"x1 1/4"	1.56"	.69"	.94"	1.78"	.81"	1.06"	16 1/2"	2.1
1053	1 1/8"x1 5/16"	1.63"	.75"	1.03"	1.94"	.88"	1.19"	18 1/8"	2.4
1061	1 1/4"x1 7/16"	1.78"	.88"	1.34"	2.13"	.94"	1.37"	20"	3.9
1063	1 7/16"x1 5/8"	2.19"	1.00"	1.50"	2.47"	1.13"	1.50"	22 1/2"	4.6
1066	1 13/16"x2"	2.66"	1.19"	1.56"	2.84"	1.25"	1.66"	25 3/4"	7.4
1069	2 3/16"x2 3/8"	3.13"	1.38"	1.87"	3.38"	1.50"	2.00"	27"	9.0

NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

12-POINT BOX WRENCHES

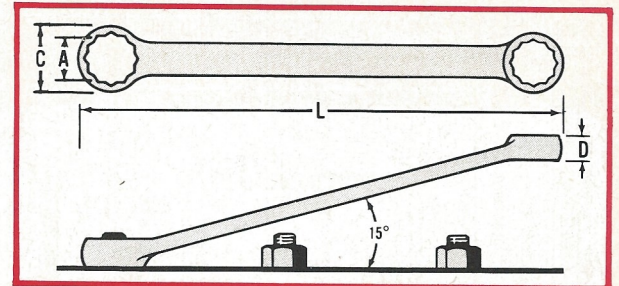
Safety Type—with Strong, Thin Walls for Maximum Clearance



Fedl. Description: "Box Wrench, Double Head, 12-Point, 15° Offset Each End." **Specs.:** GGG-W-636a, Type 1, Class 1, Style A (Nos. 1120L-1131L and 1133-1164) and Style B (Nos. 1120-1131).

Thin but very strong box walls and resulting compact heads permit use in close quarters. Walls are thinner at the wrench tip than at the shank end of the box where greater strength is needed. Box openings are counter-sunk for easy placement over a nut. Streamlined shanks provide comfortable grip, reduce the weight and allow long use without fatigue. These box wrenches are forged from special alloy steels and scientifically heat treated to give the desired strength, toughness, and hardness. Accurate openings speed work, reduce wear. Chrome plating gives a bright, rust-proof finish.

Heads are offset 15° from shank to clear objects and to protect hands.



NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END		LARGE OPENING END		TOTAL LENGTH (L)	WT., LBS.
		HEAD O.D. (C)	HEAD THKNS. (D)	HEAD O.D. (C)	HEAD THKNS. (D)		
1120	5/16" x 3/8"	.53"	.28"	.60"	.31"	4 1/4"	.05
1122	3/8" x 7/16"	.63"	.31"	.72"	.33"	4 5/8"	.06
1125	7/16" x 1/2"	.69"	.33"	.77"	.36"	5"	.09
1126	1/2" x 9/16"	.77"	.36"	.85"	.39"	5 3/8"	.11
1127	1/2" x 19/32"	.77"	.36"	.90"	.39"	5 5/16"	.12
1130	9/16" x 5/8"	.85"	.39"	.94"	.44"	5 3/4"	.14
1131	5/8" x 3/4"	.94"	.44"	1.10"	.50"	6 1/8"	.20
1133	19/32" x 1 1/16"	.90"	.39"	1.04"	.45"	10"	.30
1134	5/8" x 1 1/16"	.97"	.44"	1.06"	.45"	10 5/8"	.34
1135	1 1/16" x 3/4"	1.06"	.47"	1.14"	.50"	11 1/4"	.43
1136	1 1/16" x 7/8"	1.08"	.47"	1.34"	.53"	11 7/8"	.54
1137	1 1/16" x 25/32"	1.05"	.47"	1.17"	.50"	12 1/2"	.43
1139	3/4" x 7/8"	1.14"	.50"	1.30"	.56"	13 1/8"	.63
1140	13/16" x 7/8"	1.24"	.53"	1.30"	.56"	13 7/8"	.65
1141	7/8" x 1 1/16"	1.32"	.56"	1.58"	.61"	14 5/8"	.84
1145	1 5/16" x 1"	1.40"	.58"	1.50"	.59"	15 1/2"	.93
1147	1 5/16" x 1 1/16"	1.43"	.59"	1.62"	.59"	16 3/8"	1.08
1150	1 1/16" x 1 1/8"	1.59"	.61"	1.68"	.66"	17 1/4"	1.17
1151	1 1/16" x 1 1/4"	1.59"	.61"	1.85"	.69"	18 1/4"	1.38
1155	1 1/4" x 1 5/16"	1.85"	.70"	1.95"	.72"	19 1/4"	1.54
1160	1 1/4" x 1 3/8"	1.85"	.70"	2.03"	.73"	20 1/4"	1.82
1161	1 1/4" x 1 7/16"	1.91"	.75"	2.18"	.78"	21 1/4"	2.0
1162	1 7/16" x 1 1/2"	2.13"	.81"	2.23"	.84"	22 1/4"	2.3
1163	1 7/16" x 1 5/8"	2.19"	.84"	2.50"	.91"	23 1/4"	2.8
1164	1 5/8" x 1 11/16"	2.52"	.91"	2.58"	.97"	24 1/2"	3.1

LONG-TYPE (FOR PROVIDING ADDITIONAL LEVERAGE ON HARD PULLS)

1120L	5/16" x 3/8"	.54"	.31"	.62"	.33"	7 3/8"	.09
1122L	3/8" x 7/16"	.63"	.33"	.72"	.34"	7 5/8"	.11
1125L	7/16" x 1/2"	.71"	.35"	.79"	.36"	7 7/8"	.14
1126L	1/2" x 9/16"	.79"	.38"	.88"	.38"	8 3/8"	.18
1130L	9/16" x 5/8"	.88"	.39"	.96"	.44"	8 7/8"	.24
1131L	5/8" x 3/4"	.96"	.44"	1.12"	.50"	9 7/16"	.37

BOX WRENCH SETS



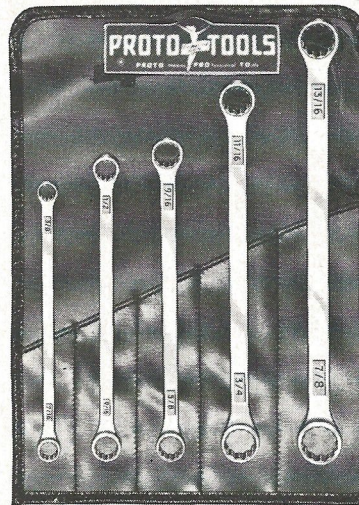
NO. 1100K SET

A fine basic set of five double-end box wrenches in the most-used range to which you can add more sizes as they are needed. All opening sizes are provided from $\frac{3}{8}$ " through $\frac{7}{8}$ " in $\frac{1}{16}$ " steps.

CONTENTS OF NO. 1100K SET

NO.	OPENING SIZES	LENGTH
1122L	$\frac{3}{8}$ " x $\frac{7}{16}$ "	7 $\frac{5}{8}$ "
1126L	$\frac{1}{2}$ " x $\frac{9}{16}$ "	8 $\frac{3}{8}$ "
1130L	$\frac{9}{16}$ " x $\frac{5}{8}$ "	8 $\frac{7}{8}$ "
1135	$1\frac{1}{16}$ " x $\frac{3}{4}$ "	11 $\frac{1}{4}$ "
1140	$1\frac{3}{16}$ " x $\frac{7}{8}$ "	13 $\frac{7}{8}$ "
2405	Vinyl Kit, 10"x15"	

Weight, 2.2 Lbs.



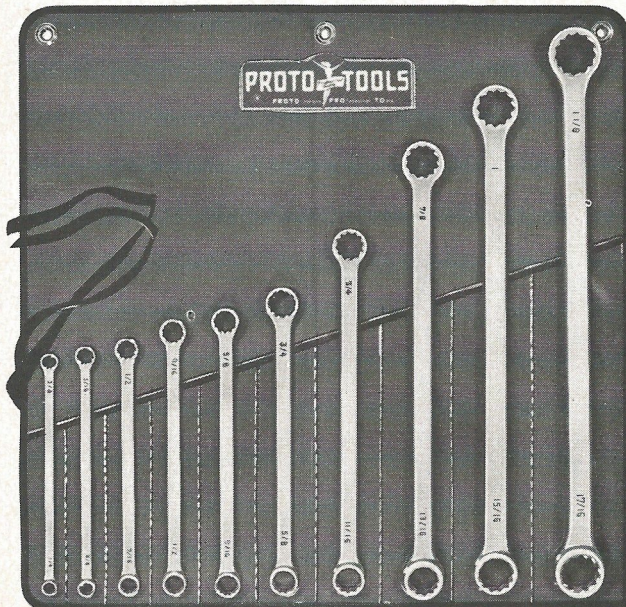
NO. 1100M SET

This master set of ten double-end box wrenches for professional use will take care of almost all common size nuts and bolts. It includes every nominal opening size from $\frac{5}{16}$ " through $1\frac{1}{8}$ " in $\frac{1}{16}$ " steps.

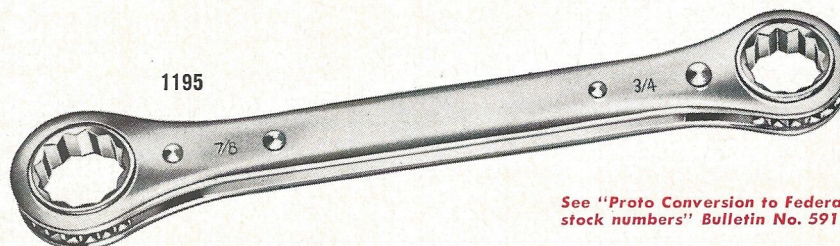
CONTENTS OF NO. 1100M SET

NO.	OPENING SIZES	LENGTH
1120L	$\frac{5}{16}$ " x $\frac{3}{8}$ "	7 $\frac{3}{8}$ "
1122L	$\frac{3}{8}$ " x $\frac{7}{16}$ "	7 $\frac{5}{8}$ "
1125L	$\frac{7}{16}$ " x $\frac{1}{2}$ "	7 $\frac{7}{8}$ "
1126L	$\frac{1}{2}$ " x $\frac{9}{16}$ "	8 $\frac{3}{8}$ "
1130L	$\frac{9}{16}$ " x $\frac{5}{8}$ "	8 $\frac{7}{8}$ "
1131L	$\frac{5}{8}$ " x $\frac{3}{4}$ "	9 $\frac{7}{16}$ "
1135	$1\frac{1}{16}$ " x $\frac{3}{4}$ "	11 $\frac{1}{4}$ "
1140	$1\frac{3}{16}$ " x $\frac{7}{8}$ "	13 $\frac{7}{8}$ "
1145	$1\frac{5}{16}$ " x 1"	15 $\frac{1}{2}$ "
1150	$1\frac{1}{8}$ " x $1\frac{1}{8}$ "	17 $\frac{1}{4}$ "
2418	Vinyl Kit, 18 $\frac{7}{8}$ " x 18 $\frac{1}{2}$ "	

Weight, 5.2 Lbs.



RATCHETING BOX WRENCHES



See "Proto Conversion to Federal stock numbers" Bulletin No. 5918

Many applications. User can safely loosen or tighten a nut and then fast run the nut without lifting wrench or switching to another tool. Turning over wrench reverses direction. Laminated construction adds strength and reduces weight. Chrome plated for rust protection.

NO.	NOMINAL OPENING SIZES	NO. OF POINTS IN BOX	SMALL OPENING END LARGE OPENING END				TOTAL LENGTH	WT., LBS.
			HEAD O.D.	HEAD THKNS.	HEAD O.D.	HEAD THKNS.		
1191	$\frac{1}{4}$ " x $\frac{5}{16}$ "	6	.56"	.38"	.63"	.38"	4 $\frac{1}{4}$ "	.13
1192	$\frac{3}{8}$ " x $\frac{7}{16}$ "	6	.75"	.38"	.88"	.38"	5 $\frac{1}{2}$ "	.18
1193	$\frac{1}{2}$ " x $\frac{9}{16}$ "	6	1.00"	.50"	1.13"	.50"	6 $\frac{3}{4}$ "	.39
1194	$\frac{5}{8}$ " x $1\frac{1}{16}$ "	12	1.19"	.50"	1.31"	.50"	8"	.60
1196	$\frac{3}{8}$ " x $\frac{3}{4}$ "	12	1.31"	.50"	1.44"	.50"	8 $\frac{1}{8}$ "	.64
1195	$\frac{3}{4}$ " x $\frac{7}{8}$ "	12	1.38"	.50"	1.56"	.50"	9 $\frac{1}{4}$ "	.73

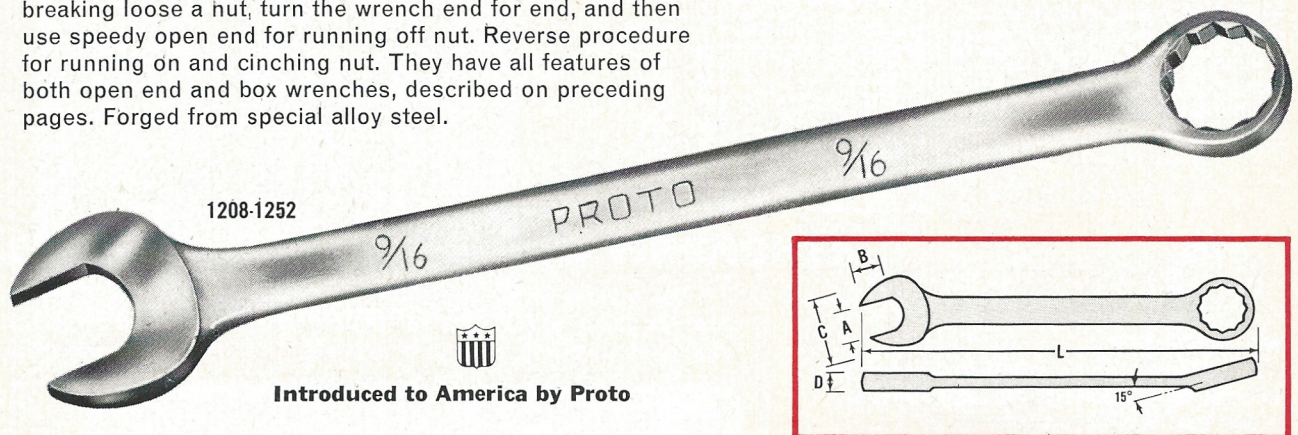
NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

COMBINATION BOX & OPEN END WRENCHES

THE TYPE FOR BOTH SPEED AND SAFETY

Same opening size on each end. Use safe box end for breaking loose a nut, turn the wrench end for end, and then use speedy open end for running off nut. Reverse procedure for running on and cinching nut. They have all features of both open end and box wrenches, described on preceding pages. Forged from special alloy steel.

Federal Description: "Combination wrench, open end and 15° offset box." Specs.: GGG-636a, Type III



Introduced to America by Proto

NO.	NOMINAL OPENING SIZES (A)	OPEN END			BOX END			TOTAL LENGTH (L)	WT., LBS.
		JAW DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	NO. OF POINTS	HEAD O.D. (C)	HEAD THKNS. (D)		
1208	1/4"	.25"	.59"	.19"	6	.43"	.25"	3"	.02
1210	5/16"	.25"	.72"	.20"	12	.53"	.28"	3 3/4"	.03
1211	11/32"	.28"	.78"	.20"	6	.53"	.28"	4"	.06
1212	3/8"	.28"	.85"	.20"	12	.60"	.31"	4 1/2"	.06
1214	7/16"	.37"	.97"	.23"	12	.70"	.34"	5 1/4"	.10
1216	1/2"	.37"	1.08"	.27"	12	.81"	.36"	6"	.14
1218	5/8"	.50"	1.23"	.30"	12	.88"	.38"	6 3/4"	.20
1219	3/4"	.50"	1.23"	.30"	12	.88"	.38"	6 3/4"	.19
1220	7/8"	.50"	1.36"	.33"	12	.96"	.44"	7 1/2"	.27
1222	1 1/16"	.56"	1.50"	.34"	12	1.04"	.47"	8 1/4"	.34
1224	1 1/8"	.59"	1.63"	.38"	12	1.12"	.50"	9 1/4"	.45
1226	1 1/4"	.62"	1.75"	.39"	12	1.22"	.53"	10 1/4"	.55
1228	1 3/8"	.69"	1.83"	.41"	12	1.30"	.53"	11 1/4"	.65
1230	1 1/2"	.75"	2.00"	.44"	12	1.40"	.58"	12 3/8"	.82
1232	1 5/8"	.75"	2.06"	.47"	12	1.50"	.59"	13 3/8"	.94
1234	1 3/4"	.81"	2.26"	.50"	12	1.58"	.63"	14 3/8"	1.19
1236	1 7/8"	.81"	2.65"	.52"	12	1.68"	.66"	15 3/4"	1.36
1240	1 1/2"	1.00"	2.63"	.53"	12	1.86"	.69"	17"	1.68
1242	1 5/8"	1.06"	2.70"	.56"	12	1.96"	.70"	18 1/8"	1.94
1244	1 3/4"	1.09"	2.88"	.59"	12	2.04"	.73"	19 3/8"	2.0
1246	1 7/8"	1.12"	3.10"	.65"	12	2.18"	.78"	20 5/8"	2.6
1248	1 1/2"	1.25"	3.36"	.66"	12	2.19"	.84"	21 3/4"	3.0
1252	1 5/8"	1.25"	3.36"	.69"	12	2.42"	.90"	23"	3.50
1254	1 11/16"	1.25"	3.36"	.69"	12	2.42"	.90"	23"	3.42
1256	1 3/4"	1.53"	3.94"	.81"	12	3"	1.06"	26"	5.80
1258	1 13/16"	1.53"	3.94"	.81"	12	3"	1.06"	26"	5.80
1260	1 7/8"	1.47"	3.94"	.81"	12	3"	1.06"	26"	5.60
1264	2"	1.41"	3.94"	.81"	12	3"	1.06"	26"	5.48

LONG-TYPE (FOR PROVIDING ADDITIONAL LEVERAGE ON HARD PULLS)

1208L	1/4"	.25"	.59"	.19"	6	.43"	.25"	4 7/8"	.04
1210L	5/16"	.25"	.72"	.20"	12	.53"	.28"	5 3/4"	.05
1210LH	5/16"	.25"	.72"	.20"	6	.53"	.28"	5 3/4"	.05
1212L	3/8"	.28"	.85"	.20"	12	.61"	.31"	6 5/8"	.08
1212LH	3/8"	.28"	.85"	.20"	6	.61"	.31"	6 5/8"	.08
1214L	7/16"	.37"	.97"	.23"	12	.71"	.34"	7 1/2"	.13
1214LH	7/16"	.37"	.97"	.23"	6	.71"	.34"	7 1/2"	.13
1216L	1/2"	.37"	1.08"	.27"	12	.79"	.36"	8 1/4"	.17
1216LH	1/2"	.37"	1.08"	.27"	6	.79"	.36"	8 1/4"	.17
1218L	5/8"	.50"	1.23"	.30"	12	.88"	.38"	9 1/8"	.25
1218LH	5/8"	.50"	1.23"	.30"	6	.88"	.38"	9 1/8"	.25
1220L	3/4"	.50"	1.36"	.33"	12	.98"	.44"	10"	.33
1222L	1 1/16"	.56"	1.50"	.34"	12	1.06"	.47"	10 7/8"	.38
1224L	1 1/8"	.59"	1.63"	.38"	12	1.14"	.50"	11 3/4"	.51

COMBINATION WRENCH SETS



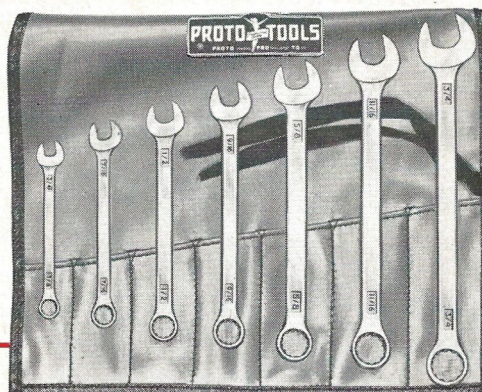
NO. 1200H SET

A very popular basic set of seven combination box and open end wrenches, including the most useful openings. Sizes range from $\frac{3}{8}$ " thru $\frac{3}{4}$ " in $\frac{1}{16}$ " steps.

CONTENTS OF NO. 1200H SET

NO.	SIZE OF OPENINGS	LENGTH
1212	$\frac{3}{8}$ "	4 $\frac{1}{2}$ "
1214	$\frac{7}{16}$ "	5 $\frac{1}{4}$ "
1216	$\frac{1}{2}$ "	6"
1218	$\frac{9}{16}$ "	6 $\frac{3}{4}$ "
1220	$\frac{5}{8}$ "	7 $\frac{1}{2}$ "
1222	$1\frac{1}{16}$ "	8 $\frac{1}{4}$ "
1224	$\frac{3}{4}$ "	9 $\frac{1}{4}$ "
2404	Vinyl Kit, 11 $\frac{3}{8}$ "x10 $\frac{1}{2}$ "	

Weight, 1.84 Lbs.



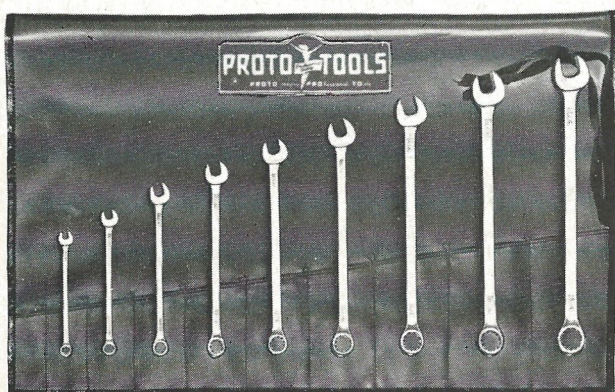
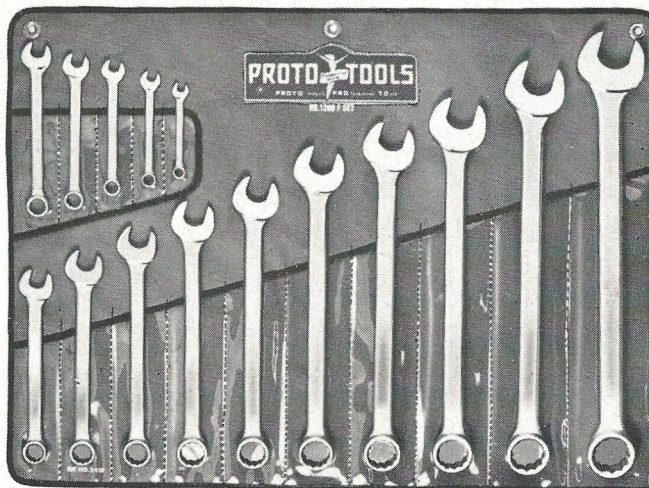
NO. 1200F SET

A master set of fifteen combination box and open end wrenches that will handle close to 100% of all jobs in most types of industry. Includes opening sizes from $\frac{3}{16}$ " thru $1\frac{1}{4}$ ".

CONTENTS OF NO. 1200F SET

NO.	SIZE OF OPENINGS	LENGTH
1210	$\frac{5}{16}$ "	3 $\frac{3}{4}$ "
1212	$\frac{3}{8}$ "	4 $\frac{1}{2}$ "
1214	$\frac{7}{16}$ "	5 $\frac{1}{4}$ "
1216	$\frac{1}{2}$ "	6"
1218	$\frac{9}{16}$ "	6 $\frac{3}{4}$ "
1220	$\frac{5}{8}$ "	7 $\frac{1}{2}$ "
1222	$1\frac{1}{16}$ "	8 $\frac{1}{4}$ "
1224	$\frac{3}{4}$ "	9 $\frac{1}{4}$ "
1226	$1\frac{3}{16}$ "	10 $\frac{1}{4}$ "
1228	$\frac{7}{8}$ "	11 $\frac{1}{4}$ "
1230	$1\frac{5}{16}$ "	12 $\frac{3}{8}$ "
1232	1"	13 $\frac{3}{8}$ "
1234	$1\frac{1}{4}$ "	14 $\frac{3}{8}$ "
1236	$1\frac{1}{8}$ "	15 $\frac{3}{4}$ "
1240	$1\frac{1}{4}$ "	17"
2413	Vinyl Kit, 25"x18 $\frac{1}{2}$ "	

Weight, 10 Lbs.



NO. 1200L SET

A very useful set of the long-type, extra-leverage wrenches. Includes all nine available sizes, from $\frac{1}{4}$ " thru $\frac{3}{4}$ ".

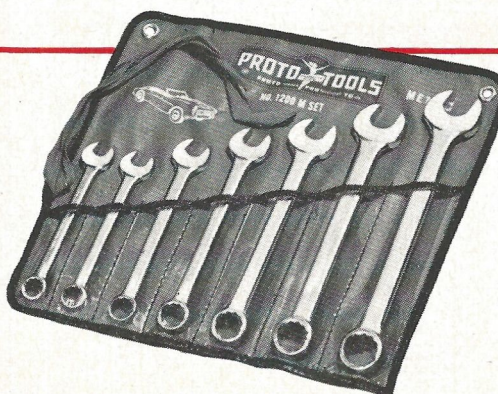
CONTENTS OF NO. 1200L SET

NO.	SIZE OF OPENINGS	LENGTH
1208L	$\frac{1}{4}$ "	4 $\frac{7}{8}$ "
1210L	$\frac{5}{16}$ "	5 $\frac{3}{4}$ "
1212L	$\frac{3}{8}$ "	6 $\frac{5}{8}$ "
1214L	$\frac{7}{16}$ "	7 $\frac{1}{2}$ "
1216L	$\frac{1}{2}$ "	8 $\frac{1}{4}$ "
1218L	$\frac{9}{16}$ "	9 $\frac{1}{8}$ "
1220L	$\frac{5}{8}$ "	10"
1222L	$1\frac{1}{16}$ "	10 $\frac{7}{8}$ "
1224L	$\frac{3}{4}$ "	11 $\frac{3}{4}$ "
2415	Vinyl Kit, 12 $\frac{3}{4}$ "x13 $\frac{1}{8}$ "	

Weight, 2.4 Lbs.

METRIC COMBINATION WRENCHES AND KITS

Seven most used sizes—11mm, 12mm, 13mm, 14mm, 16mm, 17mm, and 19mm. Comes in bright red and blue plastic kit. Each Proto Metric Wrench is properly broached and drop-forged to assure the right combination of strength and toughness at the most critical places.



No. 1200M Kit

NO.	SIZE OF OPENINGS	LENGTH
1211M	11mm	5 $\frac{1}{4}$ "
1212M	12mm	5 $\frac{5}{8}$ "
1213M	13mm	6"
1214M	14mm	6 $\frac{3}{4}$ "
1216M	16mm	7 $\frac{1}{2}$ "
1217M	17mm	8 $\frac{1}{4}$ "
1219M	19mm	9 $\frac{1}{4}$ "
2404M	Vinyl Kit, 11 $\frac{3}{8}$ "x10 $\frac{1}{2}$ "	

Weight, 1.84 Lbs.

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BALL PEIN HAMMERS AND HANDLES



1304 P

The perfect ball pein for all industries. Accurately balanced. Tough drop-forged head, selectively-hardened face and pein. High grade alloy steel. Polished face, chamfer, cheeks and pein. Fine quality hickory handles. Comfortable octagon shape handle. Clear lacquer finish, plus green lacquer "grip." Full spread of all popular sizes. Like all Proto tools, these hammers are of guaranteed quality, built to do the job faster.

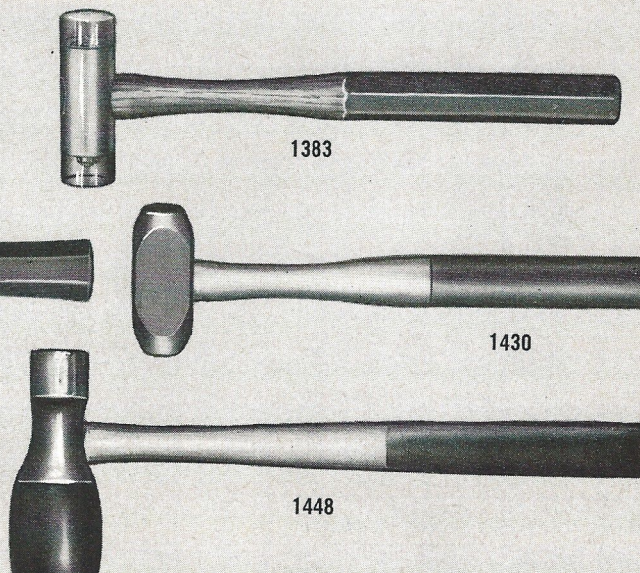
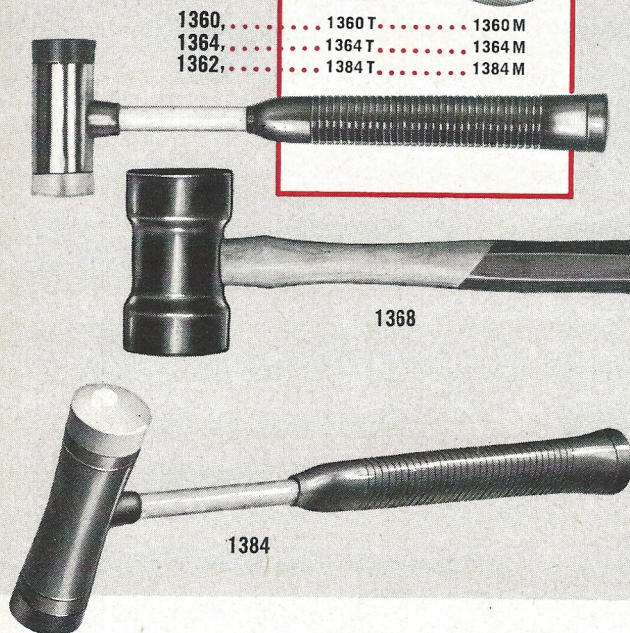
NO.	LENGTH	WT., LBS.	CLASS
1304P	10 3/4"	.40	4 Oz.
1308P	12 3/32"	.62	8 Oz.
1312P	12 3/4"	1.06	12 Oz.
1316P	14 3/8"	1.40	1 Lb.
1324P	15 5/8"	1.90	1 1/2 Lb.
1332P	15 7/8"	2.32	2 Lb.

REPLACEABLE TIPS



- 1360..... 1360 T..... 1360 M
- 1364..... 1364 T..... 1364 M
- 1362..... 1384 T..... 1384 M

SPECIAL HAMMERS



NO. 1360, 1362, 1364 SOFT FACE HAMMERS

Each hammer has medium and tough plastic tips that won't chip, flake or mushroom. Fiberglass shaft won't rot or split. Zinc head won't fly off. NO. 1360...10 OZ. NO. 1362...16 OZ. NO. 1364...32 OZ. Replaceable Tips, No. M Medium, .04 Lb. No. T Tough, .04 Lb.

NO. 1368 RUBBER MALLET

Soft but tough, non-flaking Neoprene head prevents damage. Ideal for garages, service stations, cabinet shops, etc. Hour-glass design has 2 5/8" faces. Weight, 1.46 Lbs. No. 1368H Spare Handle.

NO. 1383 PLASTIC-TIP HAMMER

With replaceable 1 5/16" round tips of tough amber plastic. Weight, .76 Lb. Spare Tip No. 1370C. No. 1370H Spare Handle.

NO. 1384 MECHANICS HAMMER

Light weight plastic soft-face hammer for light work. No-mar replaceable tips—tough, non-sparking. Shot-loaded head adds 30% more power, reduces rebound and worker fatigue. Fiberglass shaft, plastic grip. Weight, .66 Lbs. Spare Tips—No. 1384M (Medium) No. 1384T (Tough).

NO. 1430 BRASS HAMMER

1 1/2 lb. head, all-purpose non-marring hammer for bushings, gears, transmission work, etc. Tapered head for good clearance minimizes mushrooming. Weight, 1.84 Lbs. No. 1430H Spare Handle.

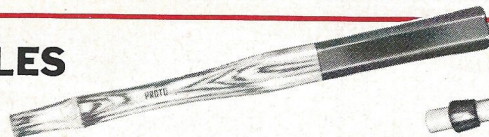
NO. 1448 TWO-WAY HAMMER

Forged steel head and replaceable rubber head. Ideal for mounting tires, drawing rivets and many other jobs. Weight, 2.6 Lbs. No. 1448B Spare Rubber Head. No. 1416H Spare Handle.

HAMMER HANDLES

WOOD HANDLES

Tough, second growth, straight-grained hickory, shaped and finished for comfortable, sure grip.



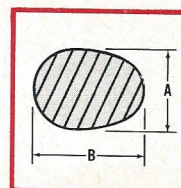
NO. 1421GH FIBERGLAS HANDLE

Including handle, resin, catalyst, mixing stick, instruction sheet, in metal edge box.

NO.	FOR HAMMERS	EYE SIZE		LENGTH	WT., LBS.
		A	B		
1368H	1368	1 9/32"	7/8"	16 1/16"	.39
1370H	1383	1 7/32"	Diam.	12 1/4"	.23
1416H	1416 & 1448	5/8"	1"	17 3/8"	.48
1419H	1419	1 1/32"	1 1/16"	11 1/8"	.17
1424H	1424 & 1427	1 1/32"	1 1/16"	13 1/8"	.18
1426H	1421, 1425, 1426 & 1428	1 3/32"	1 3/16"	13"	.22
1429H	1429	3/8"	1 1/16"	17 3/8"	.30
1430H	1430	1 5/32"	7/8"	11 3/4"	.39

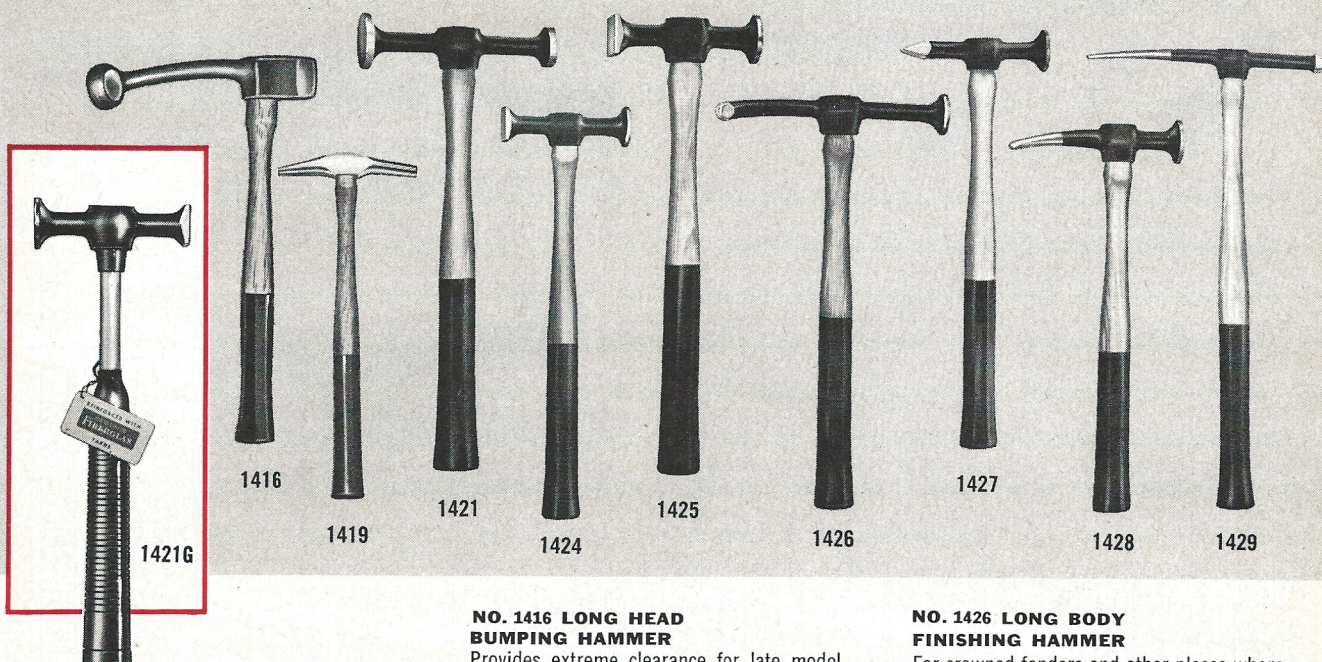
WOOD HANDLES

NO.	FOR HAMMERS	EYE SIZE		LENGTH	WT., LBS.
		A	B		
1304PH	1304P	1 3/32"	39/64"	11 1/2"	.15
1308PH	1308P	1 5/32"	49/64"	12 1/2"	.25
1312PH	1312P	1/2"	27/32"	13 1/2"	.25
1316PH	1316P	17/32"	27/32"	15"	.30
1324PH	1324P	21/32"	1"	16 1/4"	.40
1332PH	1332P	21/32"	1"	16 1/4"	.42



BODY AND FENDER HAMMERS

Federal Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



NOS. 1421G, 1424G, 1425G, 1426G, 1427G, 1428G AUTOMOTIVE HAMMERS WITH FIBERGLAS HANDLES.
(For Spare Handles See Page 24)

Fused with high quality polyester resins, glass fibers are molded parallel for the full length of the hammer shaft to give maximum strength where most needed. Many times tougher than wood. Fiberglass withstands corrosion better than wood or steel. Molded cushion-grip handle. Length and weight approximates that of wooden handle hammers.

These hammers are forged from special alloy steel and are designed to speed and simplify repairs. They have good balance, highly polished faces, and proper weight and clearances. Handles (listed on Page 24) are of tough second growth hickory.

NO. 1416 LONG HEAD BUMPING HAMMER

Provides extreme clearance for late model fenders. Weight is decreased and perfect balance achieved by means of a semi-I-beam. Head length, 9 1/2". Clearance, 6 3/4". Weight, 3.3 Lbs. No. 1416H—Spare Handle.

NO. 1419 MAGNETIC UPHOLSTERERS HAMMER

A favorite because of its long reach and head radii. The head is curved in the arc of a natural swing. Length of head, 5 3/4". Weight, .57 Lb. No. 1419H—Spare Handle.

NO. 1421 DINGING HAMMER

Has large face for roughing the bad ones into shape for finishing. Head is 6" long, with 1 1/4" and 1 5/8" round faces. Faces are slightly crowned. Weight, 1.00 Lb. No. 1426H—Spare Handle.

NO. 1424 FINISHING HAMMER

Light in weight and perfectly balanced. Has slightly crowned 1 1/4"-diameter round face, and a 1 1/16" square face. Weight, .64 Lb. No. 1424H—Spare Handle.

NO. 1425 FINISHING HAMMER

Heavier than 1424. Has slightly crowned 1 1/2"-diameter round face, and a 1 1/8" square face. Weight, .90 Lb. No. 1426H—Spare Handle.

NO. 1426 LONG BODY FINISHING HAMMER

For crowned fenders and other places where clearance is needed. Has slightly crowned 1 3/8"-diameter round face with 3 1/2" clearance, and a round cross pein, 1 1/8" wide, with 4" clearance. Weight, 1.03 Lbs. No. 1426H—Spare Handle.

NO. 1427 FINISHING HAMMER

Has wedge shaped 1"-wide cross pein with 2 1/2" clearance. Used for fender beads, corner along panel beading, etc. Has slightly crowned 1 3/8" round face with clearance of 2". Weight, .70 Lb. No. 1424H—Spare Handle.

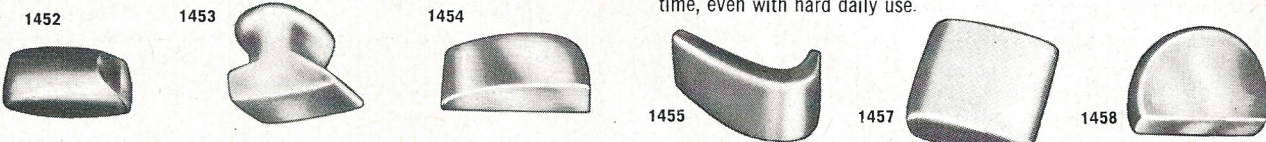
NO. 1428 PECKING HAMMER

Has pointed end for picking out small dents and a round face for finishing. Head is 5 7/8" long overall. Slightly crowned round face is 1 1/2" in diameter. Weight, .86 Lb. No. 1426H—Spare Handle.

NO. 1429 PECKING HAMMER

Eliminates uncomfortable reaching. Handle, 17 3/8", reaches to center of top. Head is 9" long overall. This hammer combines a long curved pecking point with a long-necked round pein. Weight, .88 Lb. No. 1429H—Spare Handle.

BODY AND FENDER TOOLS



NO. 1452 EGG-SHAPED DOLLY

A very useful and popular shape, with a great many different curves and angles. Size, 1 5/8"x2 1/2"x3 3/4". Weight, 3.1 Lbs.

NO. 1453 RAILROAD OR GENERAL PURPOSE DOLLY

Has a large variety of radii, perfect hand fit, thin beading edge, and 7 1/2 square inches on largest face. Heavy weight is ideal for bumping out dents. Size, 2 3/8"x2 3/4"x2 3/16". Weight, 2.9 Lbs.

NO. 1454 RADIUS DOLLY

Useful design, with many radii. One side and bottom are flat for dinging flat surfaces. Both ends high crowned. Size, 1 5/32"x2 3/16"x4 1/2". Weight, 2.9 Lbs.

NO. 1455 BEAD DOLLY

Another popular dolly, used for beads or flanges on fenders. Flat side works under long curve of fender. Thin edge is useful for corners and beading. Size, 1 7/8"x2 23/32"x4 7/16". Weight, 2.4 Lbs.

NO. 1457 SHRINKING DOLLY

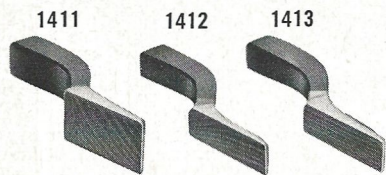
The unique shape and low crown make this dolly ideal for shrinking body metal, and for raising beads and molding. Size, 1 1/4"x3 1/16"x3 3/16". Weight, 2.2 Lbs.

NO. 1458 SEMI-ELLIPTICAL HEEL DOLLY

Provides two flat and two crowned working surfaces. Very useful in restricted places. Suitable for shrinking metal. Size, 1 3/16"x2 3/8"x3 1/4". Weight, 2.2 Lbs.

All dollies are forged of alloy steel, hardened, tempered, highly polished on working surfaces, maintaining smooth surfaces over long periods of time, even with hard daily use.

BODY AND FENDER TOOLS [CONT.]



**WOOD PADDLES
FOR MAKING
SOLDER FILLS**

Three differently shaped and specially designed paddles. The select kiln-dried hardwood used is highly resistant to charring, and it is treated by a special process to provide the peculiar qualities necessary for the smooth spreading of solder.

NO.	WORKING AREA	LENGTH	WT., LB.
1411	Flat, 1 1/16"x3 1/4"	7 3/4"	.11
1412	Curved, 1 1/16"x3 1/4"	7 3/4"	.09
1413	Flat, 1"x3 1/4"	7 3/4"	.09

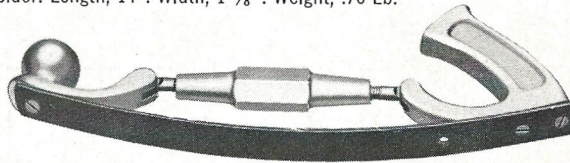
NO. 1400SP SOLDER PADDLE SET

Includes the solder paddles listed above—Nos. 1411, 1412 and 1413. In metal edge box. Weight, .40 Lb.



NO. 1501 FLEXIBLE FLAT STRAIGHT FILE

Fast cutting type for all kinds of body, fender and sheet metal work. Has curved teeth on both sides. 7 teeth to inch. Use with 1509 Holder. Length, 14". Width, 1 3/8". Weight, .70 Lb.



NO. 1509 ADJUSTABLE FILE HOLDER

Made of aluminum, this fender file holder is light but strong. Simple adjustment makes file convex, concave or flat. For use with 1501 File. Length, 16". Weight, 1.86 Lbs.

BARS



CONVENTIONAL-TYPE PRY BARS

For countless prying and aligning jobs. Forged from special alloy steel and correctly heat treated for extra strength.

NO.	STOCK	LENGTH	WT., LBS.
2116	1/2" Hexagon	16"	.72
2120	1 1/32" Hexagon	18"	1.20
2124	2 3/32" Hexagon	24"	2.4



Fedl. Description: "Pry bar (rolling head)."
Specs. (No. 2126): GGG-B-101a, Type IV

ROLLING HEAD BARS

New type gear bar, with 90° rolling head. One of the handiest types of bars you can own, having a great many uses. Especially valuable for getting into close places, such as behind gears. Forged from alloy steel.

NO.	STOCK	LENGTH	WT., LBS.
2126	1/2" Hexagon	16"	.88
2130	1 1/32" Hexagon	18"	1.54

AUTOMATIC TRANSMISSION SET No. 2350 Band Adjusting Set



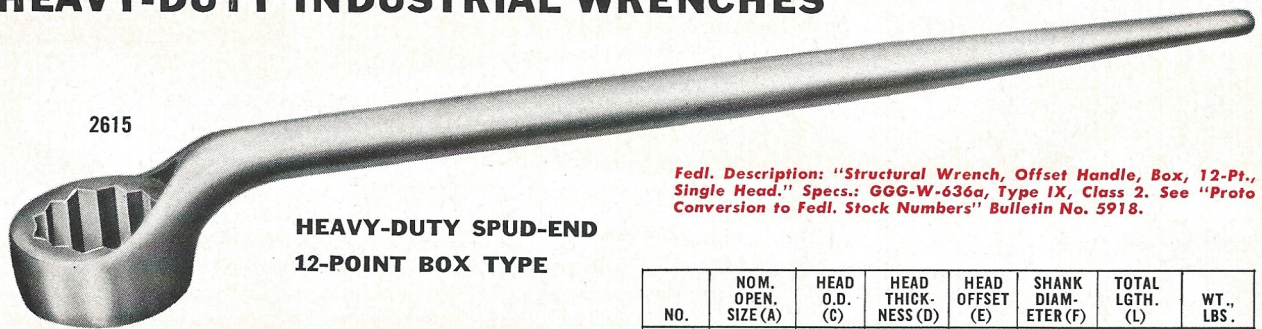
Proto's universal band adjusting set provides all the special tools needed to adjust the bands on all automatic transmissions for autos and light trucks.

Easy-to-follow instruction manual and copyrighted chart give optional specifications for all transmissions. **Manual** clearly shows each step and explains in easy-to-understand terms the proper procedure. **Chart** is for fast reference on torque specs, number of back-off turns for each year and model. With Proto's universal set of special tools anyone with a fundamental knowledge of mechanics can easily and quickly adjust the bands on any automatic transmission. Includes Proto's exclusive Torquer—faster, easier to use, even in the dark. Torquer may be used on many other applications such as the torquing of valve bodies in transmission overhauls, etc.

NO.	PART NO.	DESCRIPTION
1	2352	9/16" O.E. Wrench
2	2353	1/4" Gage
3	2354	Servo Gage—Front
4	2355	Servo Gage—Rear
5	2356	Wrench—Open End 5/8"
6	2357	Band Adjuster
7	2359	Handle & Gage 1/4" Drive, 1/4" Gage
8	2360	Manual
9	2361	Chart
10	4710	Socket—6 Pt. 5/16" Op., 1/4" Drive
11	4710S	Socket—8 Pt. 5/16" Op., 1/4" Drive
12	4742	Allen Hex. Socket 1/4" Hex, 1/4" Drive
13	4743	Screwdriver Bit 3/8" Bit, 1/4" Drive
14	5324	Socket—12 Pt. 3/4" Op., 1/2" Drive
15	6061-2	Torque Wrench 1/4" Drive
16	9973	Partitioned Metal Box 10 1/16"x8"x1 1/2"

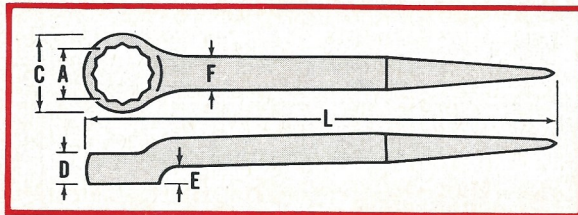
Weight 6.8 Lbs.

HEAVY-DUTY INDUSTRIAL WRENCHES



**HEAVY-DUTY SPUD-END
12-POINT BOX TYPE**

Fedl. Description: "Structural Wrench, Offset Handle, Box, 12-Pt., Single Head." **Specs.:** GGG-W-636a, Type IX, Class 2. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.



These wrenches are ideal for construction, refineries, etc. You will note the innovation of a box end in this wrench, a real safety factor. Makes quick work of loosening frozen or rusted bolts or nuts. The spud end is very handy for aligning holes in flanges. Note the clearance provided by the offset head which overcomes the usual clearance problems. Forged from alloy steel, they are extra strong. Parco-Lubrite finish protects them from rust.

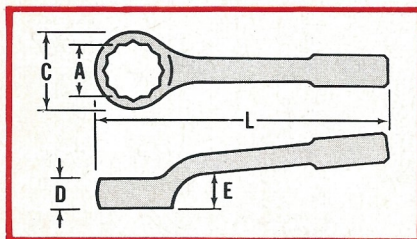
NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	SHANK DIAMETER (F)	TOTAL LGTH. (L)	WT., LBS.
2615	1 1/16"	1.34"	.63"	1.09"	.69"	14 1/2"	1.13
2617	1 1/8"	1.56"	.69"	.94"	.75"	15 5/8"	1.30
2618	1 1/4"	1.59"	.69"	.94"	.75"	16 1/4"	1.94
2620	1 1/2"	1.78"	.81"	1.06"	.75"	17"	2.2
2623	1 5/8"	2.13"	.94"	1.37"	.87"	19"	3.0
2624	1 3/4"	2.19"	1.00"	1.50"	.87"	20 1/8"	3.3
2626	1 7/8"	2.47"	1.13"	1.50"	.87"	21 1/4"	3.6
2627	1 15/16"	2.47"	1.13"	1.50"	.87"	22 1/4"	3.7
2629	1 13/16"	2.66"	1.19"	1.56"	1.00"	23 1/4"	5.5
2630	1 7/8"	2.84"	1.25"	1.66"	1.00"	24 1/4"	5.6
2632	2"	2.84"	1.25"	1.66"	1.00"	25 1/4"	6.0
2635	2 3/16"	3.13"	1.38"	1.87"	1.00"	26"	6.4
2638	2 3/8"	3.38"	1.50"	2.00"	1.00"	26 1/2"	7.0
2641	2 1/2"	4.00"	1.50"	2.25"	1.06"	28"	8.7
2644	2 3/4"	4.00"	1.50"	2.25"	1.12"	29"	8.2
2647	2 15/16"	4.44"	1.88"	2.62"	1.19"	29 3/4"	12
2650	3 1/8"	4.44"	1.88"	2.62"	1.19"	30"	11

NOTE: Special Sizes are Available from Proto Contract Dept.

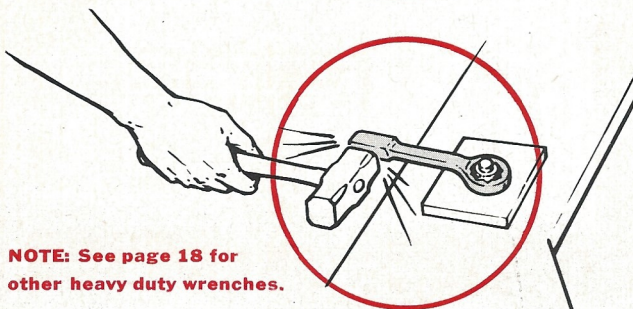
NOTE: See page 18 for other Heavy Duty wrenches

STRIKING WRENCHES, 12-POINT BOX TYPE

An Original Development by PROTO



Fedl. Description: "Slugging Wrench, 12-Point Box, Short (or Long)." **Specs.:** GGG-W-636a, Type XI. Style A (Nos. USN221-274) and Style B (Nos. USN326-374). See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.



NOTE: See page 18 for other heavy duty wrenches.

Striking wrenches have a square striking surface for use with a sledge or hammer. They are offset to allow maximum clearance. These wrenches are necessary for use on large bolts and nuts in restricted quarters. Like all of the heavy-duty Proto industrial wrenches, they are noted for their great strength, being forged from Proto-specified alloy steels. Although strong enough for extra heavy duty, they are streamlined to reduce unnecessary weight. Rust protection is by Parco-Lubrite finish.

NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	TOTAL LGTH. (L)	WT., LBS.
2617SW	1 1/16"	1.59"	.63"	.94"	8 1/2"	1.70
2618SW	1 1/8"	1.59"	.63"	.94"	8 1/2"	1.60
2620SW	1 1/4"	1.88"	.81"	1.19"	10 3/4"	3.2
2621SW	1 1/2"	1.88"	.81"	1.19"	10 3/4"	3.0
2623SW	1 5/8"	2.19"	1.00"	1.50"	12"	4.7
2624SW	1 3/4"	2.19"	1.00"	1.50"	12"	4.4
2626SW	1 7/8"	2.41"	1.13"	1.50"	12 1/4"	4.6
2627SW	1 15/16"	2.41"	1.13"	1.50"	12 1/4"	4.5
2628SW	1 3/4"	2.66"	1.19"	1.56"	13 1/16"	6.7
2629SW	1 13/16"	2.66"	1.19"	1.56"	13 1/16"	6.6
2630SW	1 7/8"	2.84"	1.25"	1.66"	13 1/16"	6.8
2631SW	1 15/16"	2.84"	1.25"	1.66"	13 1/16"	6.7
2632SW	2"	2.84"	1.25"	1.66"	13 1/16"	6.6
2635SW	2 3/16"	3.38"	1.50"	2.00"	13 1/8"	8.2
2638SW	2 3/8"	3.38"	1.50"	2.00"	13 1/8"	7.8
2641SW	2 1/2"	4.00"	1.50"	2.25"	13 1/8"	8.7
2644SW	2 3/4"	4.00"	1.50"	2.25"	13 1/8"	8.2
2647SW	2 15/16"	4.44"	1.88"	2.62"	16"	13.
2648SW	2 3/4"	4.44"	1.88"	2.62"	16"	12.6
2650SW	3 1/8"	4.44"	1.88"	2.62"	16"	12

NOTE: Special Sizes are Available from Proto Contract Dept.

NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

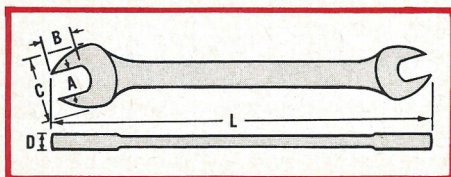
OPEN END WRENCHES 15° Angle

Speedy Type—with Streamlined Shanks and Narrow, Pear-Shaped Heads



3016-3070

Fedl. Description: "Engineer's Wrench, Double Head, Open End, 15°." Specs.: GGG-W-636a, Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



Slim, scientifically tapered jaws reduce overall width of the pear-shaped heads to permit work in close places but are extra strong at points of greatest strain. Jaws have minimum overhang to speed seating on nut, increase strength and prevent jaw spreading. Opening bases have a radius determined for high strength. Heads have the correct thickness. Heads project from shank at 15° angle, permitting full rotation of a hex nut within only a 30° arc. Streamlined shanks are easy on hands, speed work and enhance appearance. Great strength and toughness—giving extra life—result from use of PROTOLOY® special alloy steels, scientific grain-flow forging, and correct heat treatment. Chrome plating gives rust-proof, lustrous-appearing wrenches.

® Registered U.S. Pat. Off.

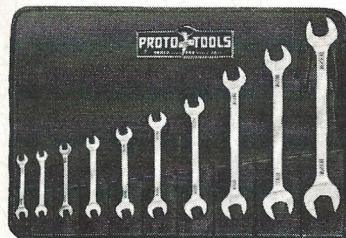
NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH (L)	WT., LBS.
		OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)		
3016	3/16" x 1/4"	.19"	.47"	.17"	.19"	.53"	.17"	4 1/8"	.02
3018	1/4" x 5/16"	.19"	.56"	.17"	.25"	.69"	.17"	4 1/2"	.04
3020	5/16" x 3/8"	.25"	.69"	.20"	.31"	.81"	.20"	4 7/8"	.05
3021	3/8" x 7/16"	.31"	.81"	.22"	.37"	.94"	.22"	5 1/4"	.05
3025	7/16" x 1/2"	.31"	.94"	.25"	.37"	1.06"	.25"	5 5/8"	.10
3026	1/2" x 9/16"	.41"	1.06"	.27"	.44"	1.22"	.27"	6"	.14
3027	9/16" x 5/8"	.44"	1.06"	.27"	.50"	1.22"	.27"	6 3/8"	.15
3030	5/8" x 3/4"	.44"	1.19"	.30"	.50"	1.31"	.30"	6 3/4"	.23
3031	3/4" x 7/8"	.50"	1.31"	.34"	.62"	1.63"	.34"	7 3/16"	.27
3033	7/8" x 1 1/16"	.56"	1.31"	.33"	.62"	1.44"	.33"	7 5/8"	.26
3034	1 1/16" x 1 1/8"	.56"	1.31"	.33"	.62"	1.44"	.33"	8 1/8"	.28
3035	1 1/8" x 1 1/4"	.56"	1.44"	.34"	.72"	1.63"	.34"	8 9/16"	.32
3036	1 1/4" x 1 1/2"	.66"	1.44"	.34"	.72"	1.81"	.34"	9"	.42
3037	1 1/2" x 1 3/4"	.66"	1.44"	.34"	.72"	1.63"	.34"	9 1/2"	.42
3038	1 3/4" x 2"	.66"	1.63"	.38"	.72"	1.81"	.38"	10"	.52
3039	2" x 2 1/8"	.66"	1.63"	.38"	.72"	1.81"	.38"	10"	.45
3040	2 1/8" x 2 1/4"	.75"	1.66"	.38"	.75"	1.81"	.38"	10 1/2"	.51
3041	2 1/4" x 2 1/2"	.78"	2.00"	.44"	.94"	2.19"	.44"	11 1/8"	.70
3042	2 1/2" x 2 3/4"	.88"	1.81"	.41"	.94"	2.00"	.41"	11 1/8"	.68
3045	2 3/4" x 3"	.72"	2.00"	.44"	.78"	2.19"	.44"	12"	.81
3047	3" x 3 1/8"	.81"	2.00"	.44"	.94"	2.19"	.44"	13"	1.00
3048	3 1/8" x 3 1/4"	.87"	2.13"	.50"	1.00"	2.38"	.50"	13 7/8"	1.20
3050	3 1/4" x 3 1/2"	.87"	2.13"	.50"	1.00"	2.38"	.50"	13 7/8"	1.20
3051	3 1/2" x 3 3/4"	.87"	2.25"	.50"	1.12"	2.65"	.50"	14 7/8"	1.42
3055	3 3/4" x 4"	1.12"	2.56"	.56"	1.19"	2.88"	.56"	16 1/4"	1.76
3060	4" x 4 1/4"	1.12"	2.75"	.56"	1.25"	3.00"	.56"	17 3/4"	2.3
3061	4 1/4" x 4 1/2"	1.12"	2.75"	.56"	1.25"	3.00"	.56"	17 3/4"	2.3
3065	4 1/2" x 4 3/4"	1.25"	3.00"	.64"	1.62"	3.31"	.64"	19 1/2"	3.0
3070	4 3/4" x 5"	1.25"	3.00"	.64"	1.62"	3.31"	.64"	19 1/2"	3.1

NOTE: Special Sizes are Available from Proto Contract Dept.

OPEN END WRENCH SETS

No. 3000H SET

An expanded set of ten open end wrenches in 15 different sizes for professional use. All opening sizes are from 1/4" through 1 1/8" in 1/16" steps.



CONTENTS NO. 3000H SET

NO.	OPENING SIZES	LENGTH
3018	1/4" x 5/16"	4 1/2"
3020	5/16" x 3/8"	4 7/8"
3025	7/16" x 1/2"	5 5/8"
3026	1/2" x 9/16"	6"
3030	5/8" x 3/4"	6 3/4"
3031	3/4" x 7/8"	7 3/16"
3035	1 1/16" x 3/4"	8 9/16"
3040	1 3/16" x 7/8"	10 1/2"
3045	1 5/16" x 1"	12"
3050	1 7/16" x 1 1/8"	13 7/8"
2406	Vinyl Kit, 21 1/4" x 15 1/2"	

Weight, 4.6 Lbs.

No. 3000N SET

This set is very popular because it includes five open end wrenches in the nine most-used sizes. All opening sizes are provided from 3/8" through 7/8" in 1/16" steps. A fine basic set to which more sizes can be added as they are needed.



CONTENTS NO. 3000N SET

NO.	OPENING SIZES	LENGTH
3021	3/8" x 7/16"	5 1/4"
3026	1/2" x 9/16"	6"
3030	5/8" x 3/4"	6 3/4"
3035	1 1/16" x 3/4"	8 9/16"
3040	1 3/16" x 7/8"	10 1/2"
2409	Vinyl Kit, 9 1/2" x 11 3/4"	

Weight, 1.72 Lbs.

TAPPET WRENCHES

Open End 15° Angle Heads

Fedl. Description: "Tappet Wrench, Double Spearhead, Open End, 15°." Specs.: GGG-W-636a, Type X, Class 1. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

Have 10" length which provides good leverage, keeps hands away from hot manifolds, and still permits use in close quarters. Extra-thin heads for close quarters. Wrench openings cover tappets, screws or lock nuts without excessive overhang, making them easier and faster to use. They are forged from fine alloy steel. Chrome finish.

NO.	NOMINAL OPENING SIZES	HEAD THICKNESS	TOTAL LENGTH	WT., LBS.
3425	7/16" x 1/2"	.188"	10"	.15
3426	1/2" x 9/16"	.188"	10"	.16
3430	9/16" x 5/8"	.188"	10"	.24
3435	1 1/16" x 3/4"	.218"	10"	.27
3440	1 3/16" x 7/8"	.218"	10"	.35

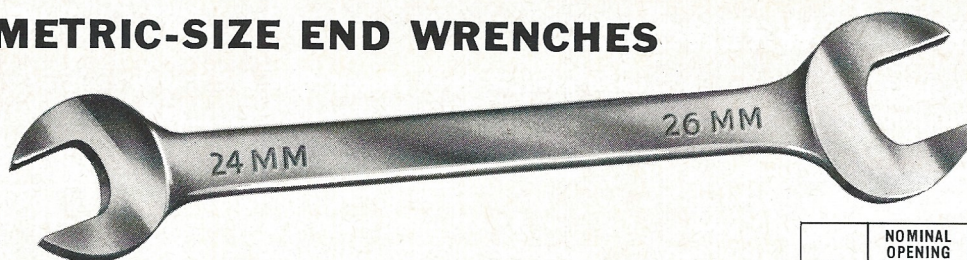
CONTENTS NO. 3400G SET

NO.	QUANTITY	OPENING SIZES
3425	1	7/16" x 1/2"
3426	2	1/2" x 9/16"
3430	1	9/16" x 5/8"
2412	Vinyl Kit, 6 3/4" x 11 1/2"	

Weight, 1.02 Lbs.



METRIC-SIZE END WRENCHES



Forged from fine alloy steel and properly heat treated for extra strength and toughness. Openings are accurately machined. The ten wrenches provide all openings from 6 through 24 millimeters by 1-millimeter steps, plus a 26-millimeter opening. Three sets are available—one with all ten open end wrenches, one with six open end wrenches, and one with seven combination wrenches.

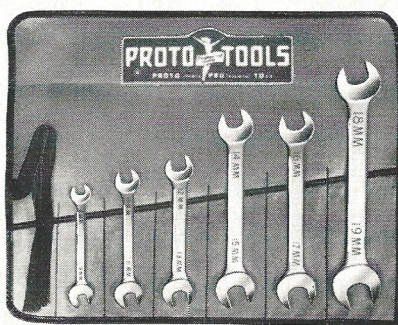
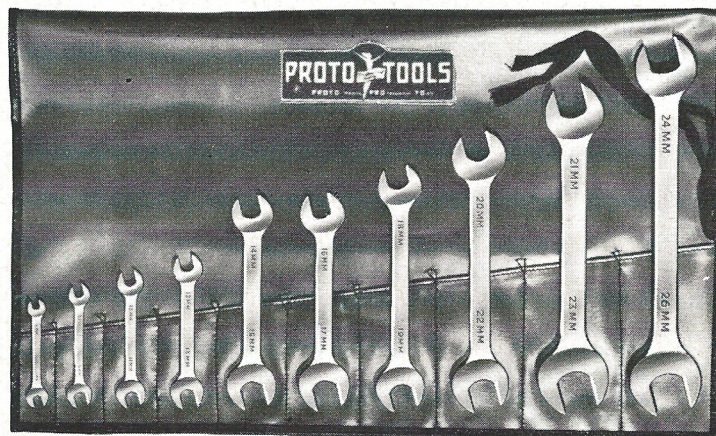
NO.	NOMINAL OPENING SIZES, MM.	HEAD THICKNESS, INCHES	LENGTH, INCHES	WT., LBS.
30607	6 x 7	.172	4 1/2	.04
30809	8 x 9	.203	4 7/8	.06
31011	10 x 11	.219	5 1/4	.07
31213	12 x 13	.250	5 5/8	.12
31415	14 x 15	.296	6 3/4	.23
31617	16 x 17	.328	8 1/8	.22
31819	18 x 19	.344	8 5/8	.38
32022	20 x 22	.370	10	.60
32123	21 x 23	.370	10 1/2	.56
32426	24 x 26	.437	11 1/8	.78

METRIC-SIZE OPEN END WRENCH SETS

CONTENTS SET NO. 30000A

NO.	OPENING SIZES, MM.	LENGTH, INCHES
30607	6 x 7	4 1/2
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 5/8
32022	20 x 22	10
32123	21 x 23	10 1/2
32426	24 x 26	11 1/8
2414	Vinyl Kit	

Weight, 3.4 Lbs.



NO.	OPENING SIZES, MM.	LENGTH, INCHES
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 5/8
2407	Vinyl Kit	

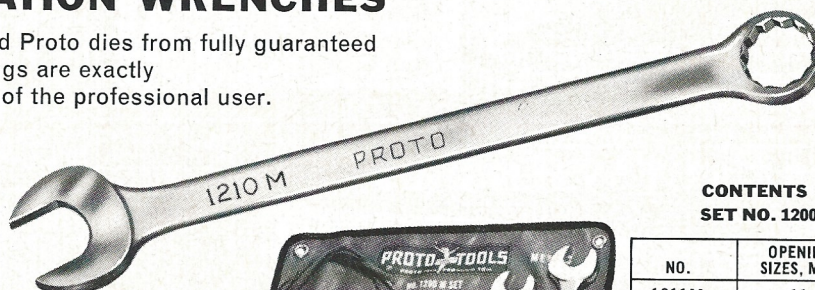
Weight, 1.20 Lbs.

CONTENTS SET NO. 30000R

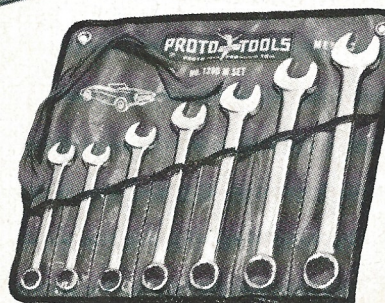
METRIC COMBINATION WRENCHES

Foreign car tools made on standard Proto dies from fully guaranteed Protoloy steels. The critical openings are exactly broached to meet all requirements of the professional user.

NO.	OPENING SIZES, MM.	LENGTH, INCHES	WT., LBS.
1210M	10	4 7/8	.06
1211M	11	5 1/4	.10
1212M	12	5 5/8	.10
1213M	13	6	.14
1214M	14	6 3/4	.20
1215M	15	7 1/2	.20
1216M	16	7 5/8	.27
1217M	17	8 1/4	.34
1218M	18	8 3/4	.34
1219M	19	9 1/4	.45
1220M	20	10 1/4	.55
1222M	22	11 1/4	.65



Bright red and blue Metric Kit contains seven most used sizes



CONTENTS SET NO. 1200M

NO.	OPENING SIZES, MM.
1211M	11
1212M	12
1213M	13
1214M	14
1216M	16
1217M	17
1219M	19
2404M	Vinyl Kit

MIDGET OPEN END WRENCHES

15° and 60° Angle Heads



3210-3226

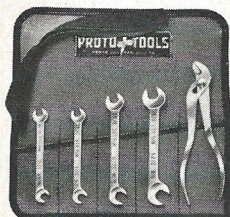
Fedl. Description: "Ignition Wrench, Double Head, Open End, 15° and 60° Heads." **Specs.:** GGG-W-636a, Type VI, Style A. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

Two openings on each wrench are duplicated on another wrench but at different head angles. Each pair (See 3210 & 3211, etc.) provides two opening sizes in both 15° and 60° angles. These obstruction wrenches are used on small assemblies, carburetors, distributors, generators, electronic and electrical equipment. Chrome finish. Forged from alloy steel.



NO.	NOMINAL OPENING SIZES		HEAD THICKNESS	LENGTH	WT., LBS.
	15° END	60° END			
3210	13/64"	15/64"	7/64"	3"	.02
3211	15/64"	13/64"	7/64"	3"	.02
3215	7/32"	1/4"	7/64"	3"	.02
3216	1/4"	7/32"	7/64"	3"	.02
3220	9/32"	5/16"	5/32"	3 1/2"	.03
3221	5/16"	9/32"	5/32"	3 1/2"	.03
3225	11/32"	3/8"	5/32"	3 3/4"	.04
3226	3/8"	11/32"	5/32"	3 3/4"	.04

NOTE: Special Sizes are Available from Proto Contract Dept.



NO. 3200B SET

A handy set of four obstruction-type wrenches with eight opening sizes, plus a midget plier.

CONTENTS OF NO. 3200B SET

NO.	OPEN. SIZES	LGTH.
3210	13/64" x 15/64"	3"
3215	7/32" x 1/4"	3"
3220	9/32" x 5/16"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
235	Midget Plier	
2417	Vinyl Kit	

Weight, .28 Lb.



NO. 3200D SET

A master set of all eight midget obstruction-type open end wrenches and a midget ignition plier.

CONTENTS OF NO. 3200D SET

NO.	OPEN. SIZES	LGTH.
3210	13/64" x 15/64"	3"
3211	15/64" x 13/64"	3"
3215	7/32" x 1/4"	3"
3216	1/4" x 7/32"	3"
3220	9/32" x 5/16"	3 1/2"
3221	5/16" x 9/32"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
3226	3/8" x 11/32"	3 3/4"
235	Midget Plier	
2416	Vinyl Kit	

Weight, .40 Lb.



3314-3340

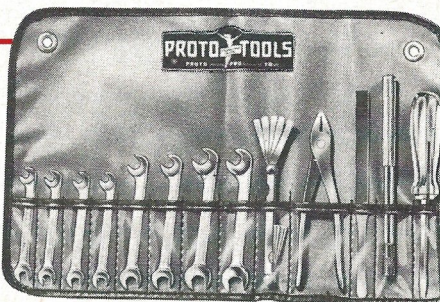
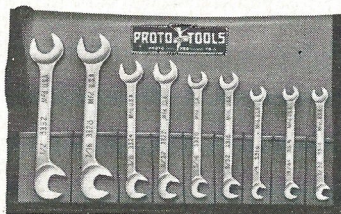
15° AND 80° ANGLE HEADS

Both openings of these wrenches are the same size. 15° and 80° angle heads are needed for delicate adjustments on distributors, generators, electronic equipment, etc. For hard to reach bolts and nuts. All sizes have narrow shanks and small fillet radii forged from alloy steel. Chrome plated.

NO. 3300A SET

A highly useful set of nine obstruction-type midget open end wrenches with nine opening sizes. Contents at right.

Fedl. Description: "Ignition Wrench, Double Head, Open End, 15° and 80° Heads." **Specs.:** GGG-W-636a, Type VI, Style B. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.



CONTENTS OF NO. 3200C SET

NO. 3200C IGNITION SET

All precision tools necessary for fine auto and marine tune-up. Handsome red and blue Vinyl fabric kit may be rolled or hung.

Weight, .50 lb.

000-D	Ignition Gauge Set
281P	Plier
2302	Point File-5"
3210	Wrench 13/64" x 15/64"
3211	Wrench 15/64" x 13/64"
3215	Wrench 7/32" x 1/4"
3216	Wrench 1/4" x 7/32"
3220	Wrench 9/32" x 5/16"
3221	Wrench 5/16" x 9/32"
3225	Wrench 11/32" x 3/8"
3226	Wrench 3/8" x 11/32"
9822	Screw Driver
9853	Screw Starter
2420	Vinyl Kit

NO.	NOMINAL OPENING SIZE BOTH ENDS	HEAD THICKNESS	LENGTH	WT., LBS.
3314	7/32"	7/64"	3 1/4"	.02
3315	15/64"	7/64"	3 1/4"	.02
3316	1/4"	7/64"	3 1/4"	.02
3318	9/32"	5/32"	3 5/8"	.03
3320	5/16"	5/32"	3 5/8"	.03
3322	11/32"	5/32"	4"	.04
3324	3/8"	5/32"	4"	.04
3328	7/16"	11/64"	4 3/4"	.07
3332	1/2"	11/64"	4 3/4"	.07
3336	9/16"	3/16"	5 3/4"	.14
3340	5/8"	3/16"	5 3/4"	.12

CONTENTS OF 3300A

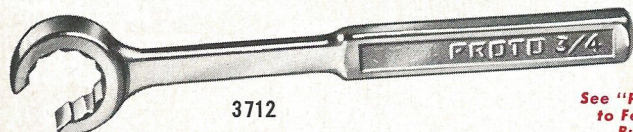
NO.	OPEN. SIZES	LGTH.
3314	7/32"	3 1/4"
3315	15/64"	3 1/4"
3316	1/4"	3 1/4"
3318	9/32"	3 5/8"
3320	5/16"	3 5/8"

NO.	OPEN. SIZES	LGTH.
3322	11/32"	4"
3324	3/8"	4"
3328	7/16"	4 3/4"
3332	1/2"	4 3/4"
2410	Vinyl Kit	

Weight, .42 Lb.

NOTE: Special Sizes are Available from Proto Contract Dept.

FLARE NUT WRENCHES



3712

Fedl. Description: "Flare Nut Wrench, Single Head, Modified 12-Point." **Specs.:** GGG-W-636a, Type XIV.

See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

Meet rigid requirements of U.S. Navy and Air Force. For assembly and repair of fluid and gas lines on hydraulic units, air brake systems, compressors, instruments, etc. Nine gripping points and deep walls prevent slippage and distortion of soft metal fittings. Forged from special alloy steel and chrome plated.

For standard nut and bolt sizes, corresponding to nominal wrench openings, see page 76.

NO.	OPENING	HEAD SLOT	HEAD THKNS.	LGTH.	WT., LBS.
3712	3/8"	9/32"	5/16"	6 1/4"	.23
3714	7/16"	11/32"	11/32"	6 3/8"	.22
3716	1/2"	3/8"	7/16"	6 1/2"	.24
3718	9/16"	7/16"	7/16"	6 5/8"	.23
3720	5/8"	1/2"	7/16"	6 3/4"	.32
3724	3/4"	5/8"	9/16"	7"	.38
3728	7/8"	11/16"	5/8"	7 1/4"	.48
3730	15/16"	3/4"	5/8"	7 3/8"	.46
3732	1"	3/4"	11/16"	7 1/2"	.58
3734	1 1/16"	13/16"	3/4"	7 5/8"	.56
3736	1 1/8"	7/8"	25/32"	7 3/4"	.66

NOTE: Special Sizes are Available from Proto Contract Dept.

PULLERS

Fedl. Specs.: GGG-P-781. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.

You Can Do More Jobs with Proto's Fewer Puller Parts

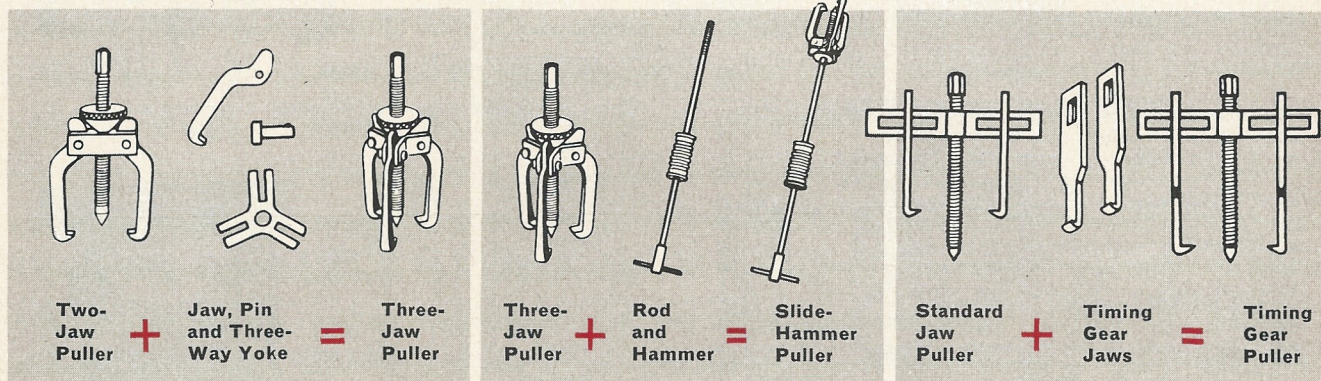
Many puller lines require an enormous investment in special pullers for all different types of jobs. *PROTO pullers have interchangeable parts. You do all jobs, with fewer parts, for less cost.*

For example, a light-duty two-jaw puller can be converted into a three-jaw type by adding a three-way yoke, pin and jaw.

A two-jaw or three-jaw light-duty puller can be quickly changed to a slide-hammer type by replacing the

screw with a T-handled rod and hammer. Likewise, the slide-hammer puller can be converted to a light-duty type by adding one screw.

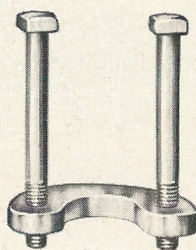
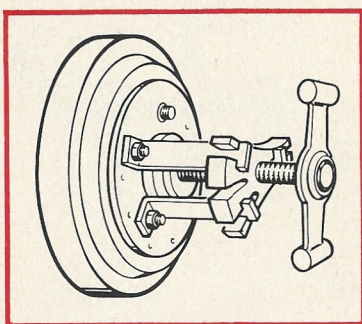
This same screw is used in PROTO medium-duty pullers, so a light-duty puller can be changed to a medium-duty type by adding a crossarm and two jaws. Regular heavy-duty jaws can be replaced by cap screw or timing gear jaws. All of these jaws are for inside or outside pulling.



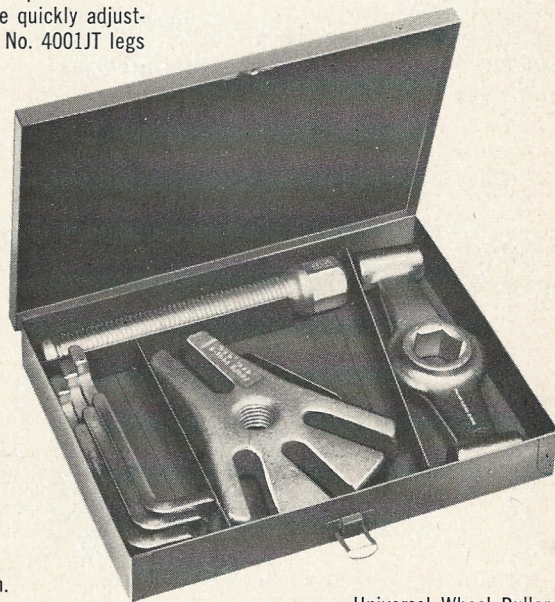
UNIVERSAL WHEEL HUB PULLERS

The simplest and fastest made for hubs and many other pulling requirements. It pulls hubs of most light trucks and cars. The No. 4001J legs are drilled for $\frac{9}{16}$ " studs and are quickly adjustable to any drum with 3, 4, 5, 6 or 7 studs in a circle up to $6\frac{1}{2}$ " diameter. The No. 4001JT legs accommodate larger $\frac{3}{4}$ " studs and are adjustable on drums in a circle up to 8" diameter. The fastest, easiest manual wheel puller made for hubs without flanges on all Chrysler cars, Studebaker, Packard, Hudson and other cars and light trucks.

PULLING A WHEEL HUB



Adapter ring 4001R and two 4001C cap screws permit pulling hubs of 1948 and older Fords.



Assembly of 4001S Screw, 4001B Body, three 4001J Legs, and 4001W Striking Wrench. Detachable Tip 4001ST keeps screw on center, reduces spreading or splitting of axles.

Universal Wheel Puller Set No. 4001G with Striking Wrench Attachment.

WHEEL HUB PULLER PARTS AND SETS

NO.	DESCRIPTION	WT. LBS.	PARTS IN SET					
			4001	4001A	4000D	4000E	4001F	4001G
4001B	Puller Body, 6 $\frac{3}{4}$ " Long	3.6	1	1	1	1	1	1
4001S	1" Puller Screw, 8" Long, with 4001ST Tip	1.43	1	1	1	1	1	1
4001ST	Detachable Tip for 4001S Screw	.06	..	..	..	..	..	..
4001J	Leg—1 $\frac{1}{16}$ " Leg Offset to Clear Hubs, 3 $\frac{7}{8}$ " from Crossarm to Offset	1.00	3	3	3	3	3	3
4001JT	Leg—1 $\frac{3}{4}$ " Leg Offset to Clear Hubs, 3 $\frac{7}{8}$ " from Crossarm to Offset	1.00	..	..	..	..	..	..
4001R	Older Ford Adapter Ring	.64	1	1	..	..	..	..
4001C	Older Ford Adapter Cap Screw, 4 $\frac{1}{2}$ " Long	.38	2	2	..	..	..	..
4001W	Striking Wrench	2.0	..	..	..	..	1	1
4001T	Steel Box, 10 $\frac{3}{4}$ " x 8 $\frac{1}{4}$ " x 1 $\frac{3}{4}$ "	2.2	..	1	..	1	..	1
SET WEIGHT, LBS.			9.43	11.63	8.03	10.23	10.7	12.23

LIGHT-DUTY PULLERS

Fedl. Specs.: GGG-P-781. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

These small pullers are designed to pull little gears, pulleys, bearings, etc., quickly and easily. The numerous applications for light-duty pullers include repairs of electric motors, refrigerators, other household appliances, oil pumps, starters, generators, etc. The narrow jaws get into very close places. Adjusting nut No. 4063 holds the jaws firmly in position so they can't slip. If adjusting nut No. 4056N is substituted, the short jaws can be reversed and used for inside pulling. Any 1/2" opening wrench can be used on the screw's hex. head. Two two-way and two three-way puller sets are available. Parts included in these sets are shown in the right columns of the table below.

LIGHT-DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	2-WAY SETS		3-WAY SETS	
			4060A PARTS	4060E PARTS	4070C PARTS	4070E PARTS
4022	Screw, 6 3/4" Long, 1/2" Hex. Head, with 4022T & 4022TS Tips	.35	1	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper	.03	..	..	..	..
4022TS	Small Detachable Tip for 4022 Screw, 1/4" Diameter	.02	..	..	..	..
4063	Knurled Non-Reversible Adjusting Nut, 1 3/4" Diameter	.28	1	1	1	1
4056N	Knurled Reversible Adjusting Nut, 2 1/2" Diameter	.75	..	..	..	..
4061	Yoke, 2 1/2" Wide, for Holding Two Jaws	.23	1	1	..	..
4071	Yoke, 2 1/2" Diameter, for Holding Three Jaws	.32	..	..	1	1
4056PN	Pin for Holding Jaw in Yoke, Held in Place by Ball Check	.03	2	2	3	3
4056J	Reversible Jaw, 3 1/2" Long, 2" Yoke to Hook, 1 5/32"-4 1/8" Inside Range, 0"-2 9/16" Outside Range	.11	2	2	..	..
4066	Outside Jaw, 4 19/32" Long, 3" Yoke to Hook, 0"-5 3/16" Range	.21	2	..	3	..
4067	Long Outside Jaw, 7 23/32", L., 6 1/8" Yoke to Hook, 0"-8 3/4" Range	.30	..	2	..	3

All Jaws That Can Be Used with Light-Duty Pullers Are Illustrated on Page 33

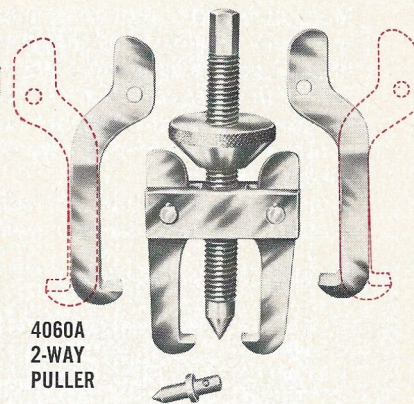
Set Weight, Lbs.

1.56 1.70 1.67 1.94



4070C
3-WAY PULLER

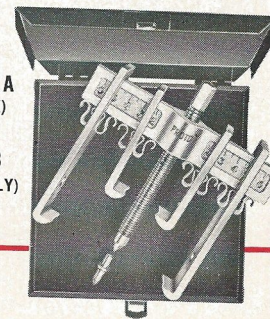
PROTO TOOLS
PROFESSIONAL QUALITY TOOLS



4060A
2-WAY PULLER

SET 4020 A
(WITH BOX)

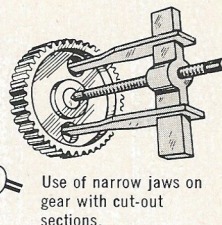
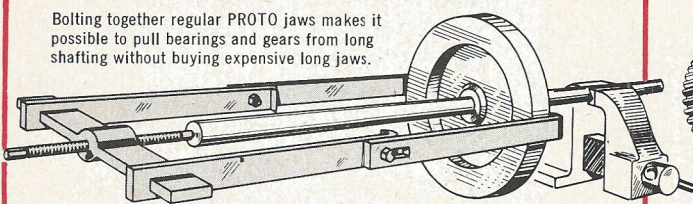
SET 4020 B
(TOOLS ONLY)



MEDIUM AND HEAVY-DUTY PULLERS

Provide straight line pulling for all types of bearings, sprockets, gears, pulleys, wheels, hubs, etc. Springs hold quick-change jaws securely on crossarm, which is marked to show the inches jaws are apart. With no linkage or pins to adjust, they are easy to set up. Five jaws have hole for bolting together and extending reach.

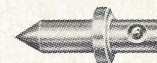
Bolting together regular PROTO jaws makes it possible to pull bearings and gears from long shafting without buying expensive long jaws.



Use of narrow jaws on gear with cut-out sections.

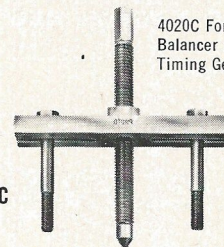


4022T



4022 TS

Detachable "live center" screw tips do not rotate when a screw is turned, preventing shaft damage, keeping screw on center, relieving screw strain and retaining better alignment.



4020 C

4020C For Harmonic Balancer Assemblies, Timing Gears, etc.

MEDIUM-DUTY PULLER PARTS AND SETS

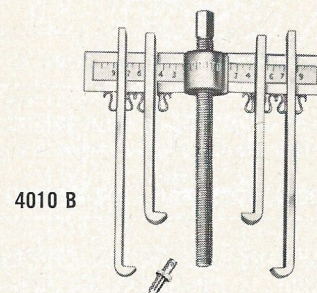
NO.	DESCRIPTION	WT., LBS.	PARTS IN SET 4020A	PARTS IN SET 4020B	PARTS IN SET 4020C
4021	Crossarm, 7" Long, with Jaw-Positioning Guide	1.00	1	1	..
4021S	Spring for Jaws 4025, 4026 and 4027	.01	4	4	..
4056C	Cap Screw Crossarm, 6" Wide	1.10	..	..	1
4022	Screw, 6 3/4" Long, 1/2" Hex. Head, with 4022T & 4022TS Tips	.35	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper	.03	..	..	..
4022TS	Small Detachable Tip for 4022 Screw, 1/4" Diameter	.02	..	..	..
†4025	Jaw, 2" from Crossarm to Hook	.33	2	2	..
†4026	Jaw, 4" from Crossarm to Hook	.50	2	2	..
4027	Narrow Jaw, 4" from Crossarm to Hook	.35	..	..	..
4028	Cap Screw, Case Hardened, 3" Long	.10	..	..	2
4029	Steel Box, 7" x 7" x 1 1/4"	1.74	1	..	..

Set Weight, Lbs.

4.79

3.05

1.65



4010 B

HEAVY-DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	PARTS IN SET 4010B	PARTS IN SET 4010C	PARTS IN SET 4030A	PARTS IN SET 4030B
4011	Crossarm, 11" Long, with Jaw-Positioning Guide	2.7	1	1	1	1
4011S	Spring for Jaws 4015, 4016, 4017 and 4018	.02	4	4	8	8
4012	Screw, 11 7/16" Long, 7/8" Hexagon Head, with 4012T Tip	1.20	1	1	1	1
4012T	Standard Detachable Tip for 4012 Screw, 60° Taper	.06	..	..	..	..
†4015	Jaw, 4 3/4" from Crossarm to Hook	.94	2	2	2	2
†4016	Jaw, 7 3/16" from Crossarm to Hook	1.26	2	..	2	2
4017	Timing Gear Jaw, 7 3/16" from Crossarm to Hook	1.14	..	..	2	2
†4018	Cap Screw Jaw, 3" from Crossarm to Hook	.88	..	2	2	2
4019	Steel Box, 11 1/8" x 11 3/4" x 1 3/4"	4.1	..	..	1	..

†Has Extra Hole Near Hook for Bolting Jaws Together, Which Saves Buying Expensive Long-Reach Jaws.

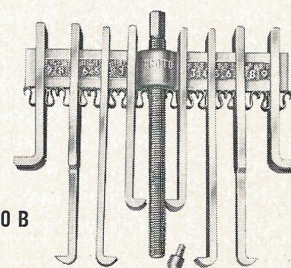
Set Weight, Lbs.

8.38

7.62

16.60

12.50



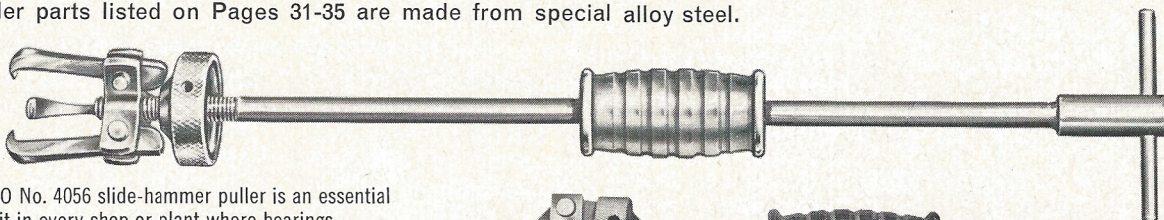
4030 B

SLIDE-HAMMER PULLERS

Fedl. Specs.: GGG-P-781. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.

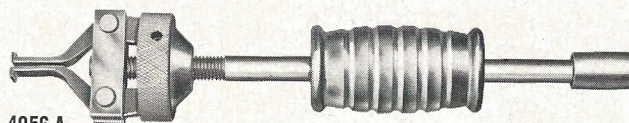
All puller parts listed on Pages 31-35 are made from special alloy steel.

4056



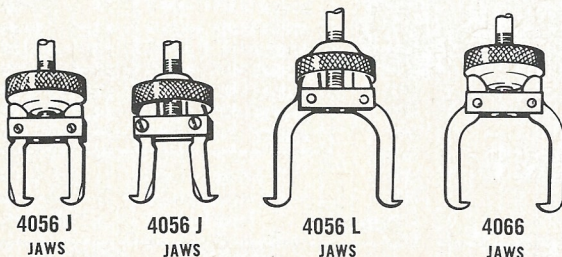
The PROTO No. 4056 slide-hammer puller is an essential pulling unit in every shop or plant where bearings, grease retainers, oil seals, sleeves and shafting must be removed. The jaws and adjusting nut are reversible, so the set can be used for either inside or outside pulling.

4056 A

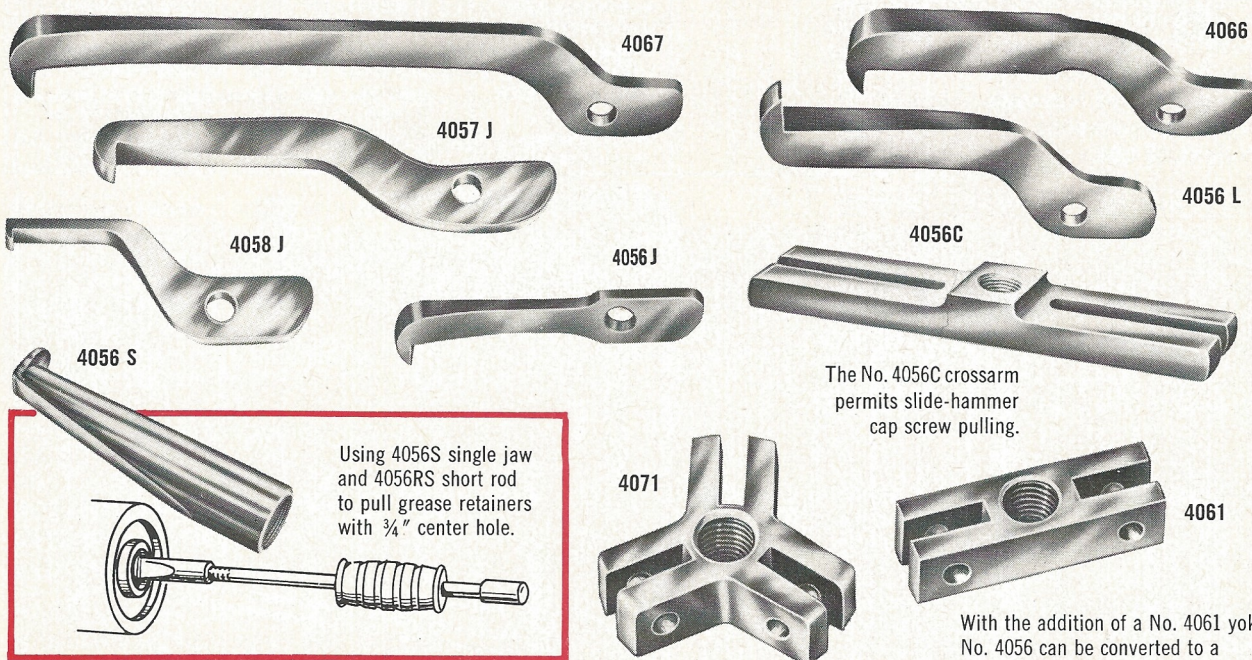
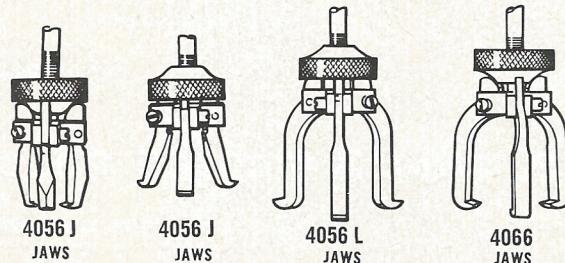


No. 4056A Pilot Bearing Puller, for $\frac{5}{8}$ "-1 $\frac{3}{4}$ " Bearings

JAW COMBINATIONS WITH 2-WAY YOKE NO. 4061



JAW COMBINATIONS WITH 3-WAY YOKE NO. 4071



Using 4056S single jaw and 4056RS short rod to pull grease retainers with $\frac{3}{4}$ " center hole.

The No. 4056C crossarm permits slide-hammer cap screw pulling.

With the addition of a No. 4061 yoke, No. 4056 can be converted to a two-jaw puller.

SLIDE-HAMMER PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	SET 4056 PARTS	SET 4056A PARTS	SET 4056B PARTS
†4056R	T-Handled Rod, 24" Long	1.90	1	..	1
†4056RS	Short Rod, 12 $\frac{3}{4}$ " Long, for Close Places and for Assembling Valve or Blind Bearing Puller	.96	..	1	..
†4056H	Sliding Hammer with Fluted Grip	2.7	1	1	1
†4056N	Knurled Reversible Adjusting Nut, 2 $\frac{1}{2}$ " Diam.	.75	1	1	1
4063	Knurled Non-Reversible Adjusting Nut, 1 $\frac{3}{4}$ " Diam.	.28	..	..	..
4061	Yoke, 2 $\frac{1}{2}$ " Wide, for Holding Two Jaws	.23	..	1	1
4071	Yoke, 2 $\frac{1}{2}$ " Diameter, for Holding Three Jaws	.32	1	..	1
†4056PN	Pin for Holding Jaw in Yoke	.03	3	2	3
4056C	Slotted Cap Screw Pulling Crossarm, 6" Wide	1.10	..	..	1
4056J	Reversible Jaw, 3 $\frac{1}{2}$ " Long, 2" Yoke to Hook, 1 $\frac{1}{4}$ "-3 $\frac{1}{4}$ " Inside and 0"-2 $\frac{1}{8}$ " Outside Ranges	.11	3	..	3
4057J	Long Reversible Jaw, 4 $\frac{3}{64}$ " Long, 3 $\frac{5}{16}$ " Yoke to Hook, 1 $\frac{1}{4}$ "-3" Inside and 0"-4 $\frac{3}{4}$ " Outside Ranges	.18	..	..	3
4058J	Inside Jaw, 3 $\frac{13}{64}$ " L., 1 $\frac{47}{64}$ " Yoke to Hook $\frac{5}{8}$ "-2" Range	.10	..	2	3
4056L	Inside Jaw, 4 $\frac{9}{16}$ " L., 3" Yoke to Hook 1 $\frac{5}{8}$ "-6" Range	.21	..	..	3
4066	Outside Jaw, 4 $\frac{19}{32}$ " L., 3" Yoke to Hook 0"-4 $\frac{3}{8}$ " Range	.21	..	..	3
4067	Long Outside Jaw, 7 $\frac{23}{32}$ " Long, 6 $\frac{1}{8}$ " Yoke to Hook 0"-6 $\frac{7}{8}$ " Range	.30	..	..	3
4056S	Single Jaw, 2 $\frac{15}{16}$ " L., for Wheel Alignment Brakes, Pulling Grease Retainers, Small Bearings, etc.	.17	..	..	1

†Shown in Illustration at Top of Page.

Set Weight, Lbs.

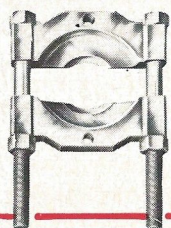
6.09

4.9

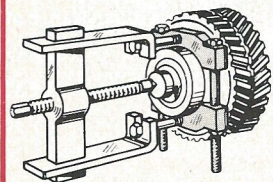
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SEPARATOR-PULLER AND STEP PLATES

Fedl. Specs.: GGG-P-781. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



4032

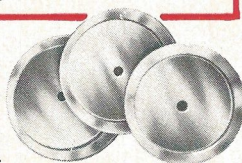
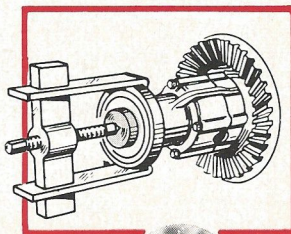


No. 4032 Bearing Separator and Puller Attachment

Flat surfaces, thin edges permit adjustment behind many gears, bearings, etc., where space is too limited for puller hooks. Protects expensive bearings. Overall width, 5 1/16". Max. opening, 4" x 4 1/2". Wt., 4.4 Lbs. Parts: Top Plate—4032A. Bottom Plate—4032B. Bolt and Nut—4032S. Top and bottom holes are 1/2-13 thread. It is also ideal as an arbor press bed plate.

Step Plate Adapters

Used on hollow shafting or housings as base for puller screw to force off bushings, gears, etc., also for installing oil seals.



NO. 4040 SET

Eleven sizes Step Plates, 4040-1 to 4040-11. Wt., 3.0 Lbs.

NO.	SMALL DIAM.	LARGE DIAM.	WT., LBS.
4040-1	3/4"	1"	.05
4040-2	7/8"	1 1/8"	.08
4040-3	1"	1 1/4"	.10
4040-4	1 1/8"	1 3/8"	.13
4040-5	1 1/4"	1 5/8"	.19
4040-6	1 3/8"	1 3/4"	.22
4040-7	1 1/2"	1 7/8"	.28
4040-8	1 5/8"	2"	.33
4040-9	1 3/4"	2 1/8"	.40
4040-10	1 7/8"	2 3/8"	.49
4040-11	2"	2 1/2"	.59
4040-12	2 1/8"	2 5/8"	.65
4040-13	2 1/4"	2 3/4"	.76
4040-14	2 3/8"	2 7/8"	.83

4040-1 THRU -14

NO. 4000AB MASTER PULLER SET

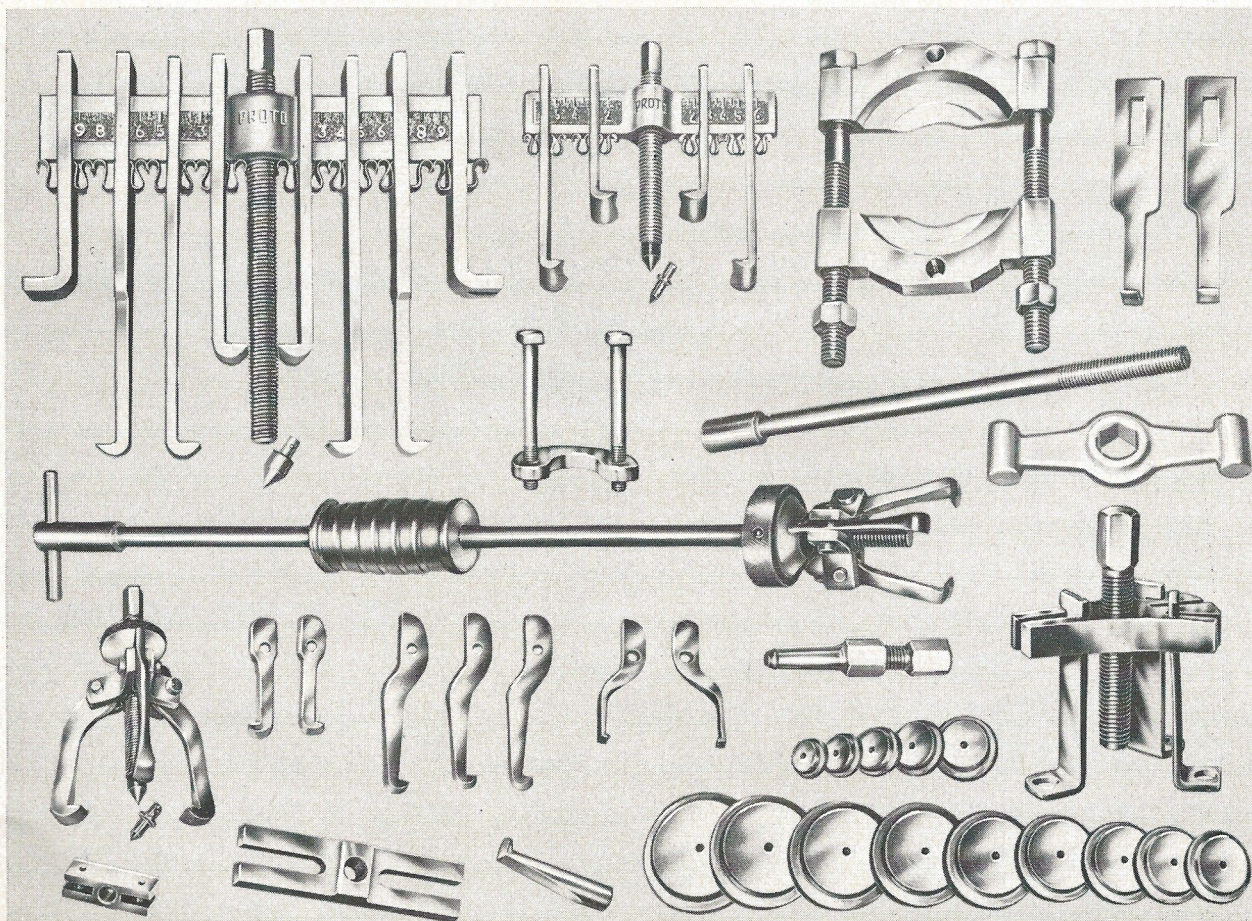
Ideal for vehicle and equipment repair shops, maintenance departments in many industries. Makes many of puller set-ups, due to parts interchangeability. Handles hundreds of pulling operations. Weight, 52 Lbs.

CONTENTS NO. 4000AB SET

NO.	QUANTITY	DESCRIPTION
4030B	1	Heavy-Duty Puller
4020B	1	Medium-Duty Puller
4056	1	Slide-Hammer Puller
4070C	1	Light-Duty Puller
4056J	2	Reversible 3 1/2" Jaw
4061	1	Yoke for Two Jaws
4001	1	Universal Wheel Puller
4001W	1	Striking Wrench
4032	1	Bearing Separator
4040	1	Step Plate Adapter Set

(CONT.)

NO.	QUANTITY	DESCRIPTION
4040-12	1	Step Plate Adapter
4040-13	1	Step Plate Adapter
4040-14	1	Step Plate Adapter
4027	2	Narrow Jaw
4056C	1	Cap Screw Crossarm
4056RS	1	Short Puller Rod
4056S	1	Single Puller Jaw
4057J	3	Reversible 4 5/8" Jaw
4058J	2	Pilot Bearing Jaw
4080	1	Blind Bearing Puller



NO. SD6 "PULLERMART"

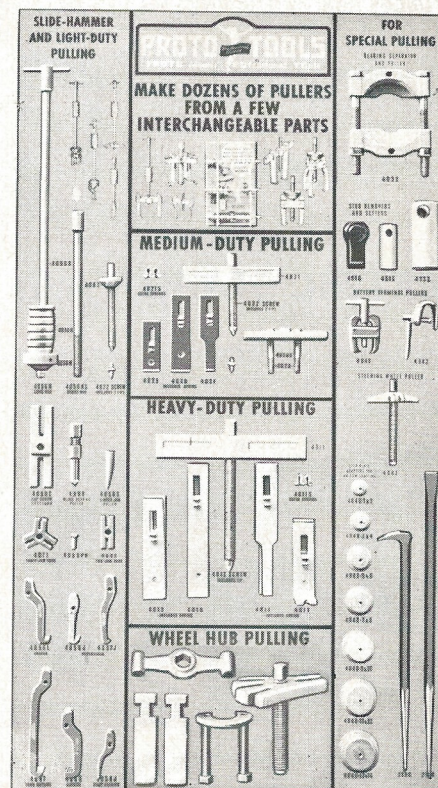
A merchandiser for dealers, a master set for garages, repair shops and industrial plants that use all types of pullers. Parts are arranged "exploded" and properly located for assembly. Ten types of assemblies are shown by drawings. Interchangeable parts can be used in many setups, eliminating the need for

a large number of costly special pullers. Sections of rack include basic parts used for five types of pulling—slide-hammer and light-duty, medium-duty, heavy-duty, wheel hub, and special. Outlines and parts numbers facilitate replacement. 32"x 63". $\frac{5}{8}$ " plywood rack has an easel back. Weight, 110 Lbs.

CONTENTS NO. SD6 "PULLERMART"

NO.	QUAN.	DESCRIPTION
2124	1	Utility Pry Bar
2130	1	Rolling Head Bar
4001	1	Wheel Puller Set
4001JT	3	Wheel Puller Leg
4001W	1	Striking Wrench
4011S	2	Spring for Jaw
4020B	1	Medium Puller Set
4021S	2	Spring for Jaw
4022	1	Medium Puller Screw
4027	2	Narrow Jaw
4028	2	Cap Screw
4030B	1	Heavy Puller Set
4032	1	Bearing Separator
4040-1-14	1	14 Step Plates
4041	1	Small Utility Puller
4042	1	Battery Terminal Puller
4043	1	Steering Wheel Puller

NO.	QUAN.	DESCRIPTION
4056	1	Slide-Hammer Puller
4056C	2	Slotted Crossarm
4056L	3	Long Inside Jaw
4056RS	1	Short Rod
4056S	1	Single Jaw Puller
4057J	3	Long Reversible Jaw
4058J	2	Pilot Bearing Jaw
4061	1	Two-Way Yoke
4063	1	Adjusting Nut
4066	3	Long Outside Jaw
4067	3	Long Outside Jaw
4080	1	Blind Bearing Puller
4510	1	Power Stud Remover
4515	1	Stud Remover
4532	1	Stud Remover
....	1	Storage Rack
5355	10	Puller Manual



SPECIAL-PURPOSE PULLERS

MANUAL STUD REMOVERS AND SETTERS

All puller parts listed on Pages 31-35 are made from special alloy steel.

Wedge type removers and setters are superior to eccentric roller type, give long service, handle very short studs ($\frac{3}{4}$ " for No. 4515), have small

turning radius which clears obstructions that would block operation of other types. Tapered, deeply-serrated wedges grip tighter as pressure is applied and take firm hold on stubborn studs. Each unit has two wedges to increase usable range. Spring-tensioned pin holds wedges in body when not in use.



Fedl. Description: "Stud Remover and Setter, Wedge." Specs.: GGG-S-775, Type IV, Style 1. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

STANDARD $\frac{1}{2}$ " SQUARE DRIVE

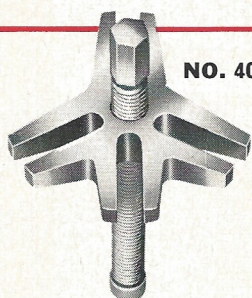
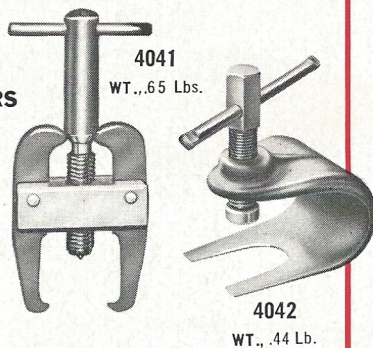
NO.	DESCRIPTION	FOR STUDS	WT., LBS.	DIAM.	LGTH.
4515	Stud Remover	$\frac{1}{4}$ " - $\frac{5}{8}$ "	.78	$1\frac{3}{16}$ "	$3\frac{1}{2}$ "
4516	Thick Wedge Only	$\frac{1}{4}$ " - $\frac{7}{16}$ "	.07		
4517	Thin Wedge Only	$\frac{1}{2}$ " - $\frac{5}{8}$ "	.04		

HEAVY-DUTY $\frac{3}{4}$ " SQUARE DRIVE

NO.	DESCRIPTION	FOR STUDS	WT., LBS.	DIAM.	LGTH.
4532	Stud Remover	$\frac{5}{8}$ " - 1"	3.4	2"	$5\frac{1}{8}$ "
4533	Thick Wedge Only	$\frac{5}{8}$ " - $\frac{3}{4}$ "	.34		
4534	Thin Wedge Only	$\frac{3}{4}$ " - 1"	.18		

NOS. 4041 AND 4042, BATTERY TERMINAL AND BEARING PULLERS

Remove terminals quickly, easily, without damaging posts. No. 4041, conventional type, is used for small bearings and other jobs. No. 4042, unusual type, costs less and is faster to set up and use.



NO. 4043 STEERING WHEEL PULLER

Removes drilled and tapped steering wheels, and ideal for many other cap screw pulling jobs. Holds two diametrically opposed cap screws, or three screws 120° apart. Rotatable screw tip is slotted to prevent interference with horn button wiring. Weight, 1.20 Lbs. No. 4043B—Spare Body. No. 4043S—Spare Screw with Tip No. 4043T—Spare Tip.

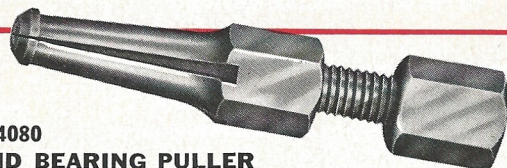
NO. 4510 POWER-TYPE STUD REMOVER AND SETTER

Concentric hole with a wedge—most efficient, fastest design available. Extra husky for turning $\frac{3}{8}$ " to $\frac{5}{8}$ " studs and bolts with $\frac{1}{2}$ " drive power guns or manual socket handles. Single, reversible wedge is forced against stud by spring—saves time, prevents accidents. Screw keeps wedge from falling. Plunger, spring and wedge mounted in sleeve turned by knurled knob for reversing. File-type teeth dig into stud. Length, $3\frac{1}{2}$ ". Weight, 1.00 Lb. No. 4511—Spare Wedge Assembly. No. 4512—Spare Revolving Sleeve Assembly.



NO. 4080 BLIND BEARING PULLER

Simple, efficient, collet-type, pulls Chevrolet, Ford and Packard pilot bearings quickly, without damage. Turning screw expands outer shoulder and grips bearing. Expands to $1\frac{1}{16}$ " dia. Has many other uses. Can be used alone or with No. 4056 slide-hammer puller. Length, $4\frac{1}{2}$ ". Weight, .34 Lb. No. 4080B—Spare Body. No. 4080S—Spare Screw.



WHITWORTH SOCKETS*

3/8" DRIVE SOCKETS 12-PT.

Most-used sizes for maintenance of British cars, motorcycles and equipment.

*Drive end fits regular U.S. Standard ratchets and attachments.



NO.	WHITWORTH SIZE	SOCKET SIZE	TOTAL LENGTH	WT., LBS.
5206W	3/16	.340"	1"	.04
5208W	1/4	.445"	1"	.06
5210W	5/16	.525"	1"	.07
5212W	3/8	.600"	1 1/8"	.11



See pages 60 and 61 for all Whitworth and Metric Sockets, wrenches.

METRIC SOCKET WRENCHES 1/4", 3/8" AND 1/2" SQUARE DRIVES

Metric-size sockets and open end wrenches are for cars, machinery, equipment, etc., made in France, Italy, Germany and most other European countries except England, which generally use Whitworth or U.S. standards. The thin-wall sockets are made from fine alloy steel, hot formed and quality chrome plated.

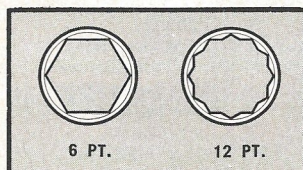


4704 M
— 4712 M

5208 M
— 5219 M



5412 M — 5432 M



3/8" SQUARE DRIVE SOCKETS (12-Point) ★

1/2" SQUARE DRIVE SOCKETS (12-Point)

1/4" SQUARE DRIVE SOCKETS (6-Point)

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
4704M	4	7/8	.01
4705M	5	7/8	.02
4706M	6	7/8	.02
4707M	7	7/8	.02
4708M	8	7/8	.02
4709M	9	7/8	.03
4710M	10	7/8	.03
4711M	11	7/8	.04
4712M	12	7/8	.05

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5208M	8	1	.04
5209M	9	1	.04
5210M	10	1	.05
5211M	11	1	.05
5212M	12	1	.06
5213M	13	1	.06
5214M	14	1	.06
5215M	15	1	.08
5216M	16	1	.07
5217M	17	1 1/16	.08
5218M	18	1 1/16	.10
5219M	19	1 3/16	.13

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5412M	12	1 13/32	.10
5413M	13	1 13/32	.11
5414M	14	1 13/32	.10
5415M	15	1 13/32	.11
5416M	16	1 13/32	.16
5417M	17	1 13/32	.13
5418M	18	1 13/32	.17
5419M	19	1 13/32	.16
5420M	20	1 13/32	.18
5421M	21	1 13/32	.21
5422M	22	1 17/32	.28
5423M	23	1 17/32	.32
5424M	24	1 17/32	.37
5425M	25	1 17/32	.30
5426M	26	1 17/32	.32
5427M	27	1 17/32	.31
5428M	28	1 25/32	.49
5429M	29	1 25/32	.46
5430M	30	1 25/32	.47
5432M	32	1 25/32	.49

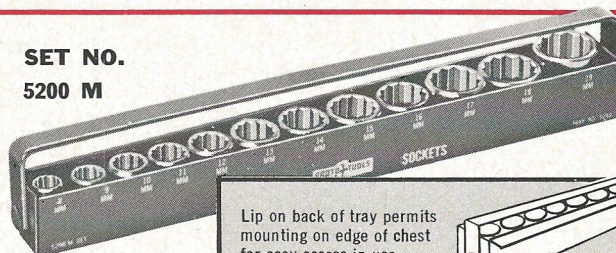
METRIC SOCKET SETS

SET NO. 5200M (12 Sockets & Tray)

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing above.

Twelve sizes 3/8" sq. drive, 12 point, Metric sockets in red-lacquered tray—keeps sockets separate from look-alike Standard sockets in mechanic's tool chest. All sockets hot-punched in special analysis alloy steel, quality chrome plate. Size and numbers stenciled on side of tray. Spillproof locking band. All Proto guaranteed.

SET NO.
5200 M

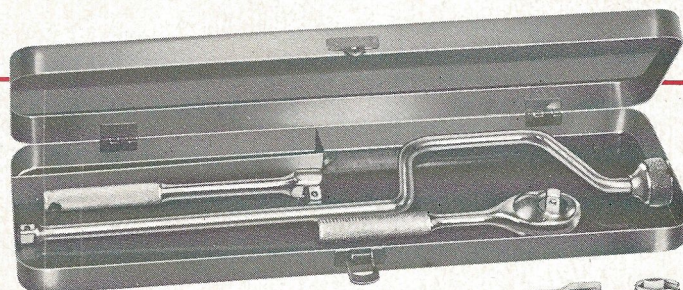


Lip on back of tray permits mounting on edge of chest for easy access in use.

FREE

**MECHANIC'S
MILLIMETER
POCKET RULE**

packed with each set. Measures both millimeters and inches. Quickly familiarizes any mechanic with metric bolt and nut sizes

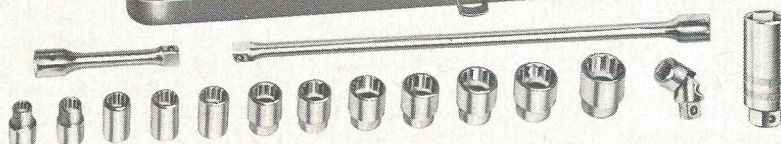


5200ABM SET

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing above.

Set also includes the following:

- 5026HP Spark Plug Socket, 12 pt. 14mm opening
- 5249 Ratchet, 7"
- 5260 Extension, 3 1/2"
- 5262 Extension, 12"
- 5265 Hinge Handle, 7 3/8"
- 5270 Universal Joint
- 5280 Speed Handle, 16 7/8"
- 5295 Steel Box, 18 1/2" x 5 1/4" x 1 1/2"

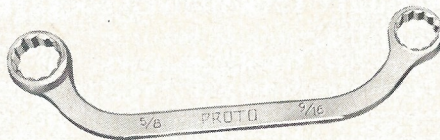


Complete Metric Socket Set and Attachments. Same 12 Sockets as in 5200M; plus 5026HP special patented spark plug-holding Socket with rubber insert; reversible Ratchet; two extensions; Hinge Handle; U-Joint and Speeder. All in rugged steel box lacquered in red. High quality alloy steel and workmanship. Every item guaranteed.

SPECIAL-PURPOSE TOOLS

For Fedl. Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NO. 1730 OBSTRUCTION BOX WRENCH



Useful on many starters. Clearance at middle, 1". Box openings, 12 point, $\frac{5}{16}$ " x $\frac{5}{8}$ ". Length 6 $\frac{1}{2}$ ". Alloy steel, chrome plated. Weight, .20 Lb. See page 23 for other sizes.

NO. 2005 BRAKE ADJUSTING TOOL



To remove and replace Bendix Brake Springs (General Motors' cars and many others) and any type where the spring is attached to a post. Has replaceable spring removal socket. Total wt., .40 Lbs. No. 2005 S Replaceable socket.

NO. 2006 & 2007 BRAKE ADJUSTING TOOLS



No. 2006 adjusts star nuts on two-shoe Bendix brakes. It is 9 $\frac{1}{16}$ " long, has 1 $\frac{3}{4}$ " spoons and weighs .30 Lb.



No. 2007 is for Chevrolet brakes and other close places. It is 6 $\frac{1}{16}$ " long, has 1 $\frac{3}{16}$ " and 1 $\frac{7}{16}$ " spoons and weighs .18 Lb. Both are alloy steel.

NO. 2008 CHRYSLER BRAKE WRENCH



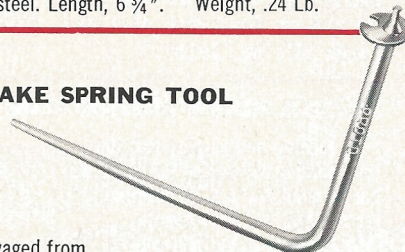
Has $\frac{3}{8}$ " hex. socket for brake bleeder screw and $\frac{7}{16}$ " hex. socket for adjusting screw on late Chryslers and De Sotos. Clears tires. Alloy steel. Length, 7 $\frac{3}{16}$ ". Weight, .19 Lb.

NO. 2009 BRAKE BLEEDER WRENCH



For Chevrolets, Fords and Lincolns with ball joint front end suspension. L-shaped handle has $\frac{5}{16}$ " hex. socket to remove bleeder screw cap and $\frac{3}{8}$ " hex. socket for turning screw. Alloy steel. Length, 6 $\frac{3}{4}$ ". Weight, .24 Lb.

NO. 2010 CHRYSLER BRAKE SPRING TOOL

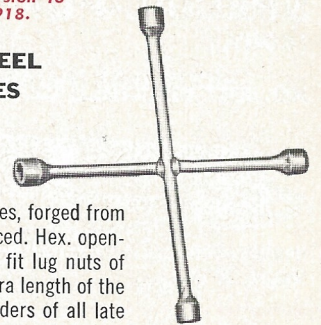


Forged, milled and swaged from Protoloy steel, this tool designed to quickly remove and replace brake shoe returns on '57, '58, '59 Chryslers, De Sotos, Dodges and Plymouths. Length 5 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ ". Wt. .25 lb.

NO. 2151 & 2152 WHEEL LUG NUT WRENCHES

No. 2151
Length, 18"
Wt., 3.0 Lbs.

No. 2152
Length, 21 $\frac{1}{2}$ "
Wt., 3.5 Lbs.



Speedy, four-way rim wrenches, forged from special steel and finely balanced. Hex. openings of $\frac{5}{8}$ ", $\frac{3}{4}$ ", $1\frac{1}{8}$ " & $\frac{7}{8}$ " fit lug nuts of most cars and trucks. The extra length of the No. 2152 clears the deep fenders of all late model cars.

NO. 2301 MUFFLER REMOVAL TOOL



A practical, simple tool for removing mufflers and tailpipes. Easy and safe to use. Makes quick work of taking off worn-out mufflers that are corroded, burned and hard to reach. Prevents damage to usable parts. Forged from special alloy steel. Length, 6 $\frac{1}{8}$ ". Weight, .29 Lb.

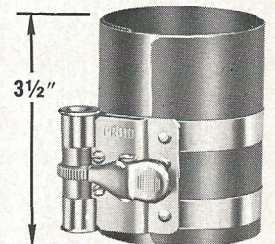
NO. 2315 PISTON RING COMPRESSOR

Single-band type, designed for low-horsepower, small-bore engines used on auxiliary power plants and pumping stations, lawn mowers, outboard motors, motor scooters, etc. Range 2" to 5". Band width 1 $\frac{3}{4}$ ". Wt. .32 lb.



NO. 2316 PISTON RING COMPRESSOR

Band-operating ratchet prevents breakage and slippage. Wide band (3 $\frac{1}{2}$ ") has 2 $\frac{1}{8}$ " to 5" range. Ell handle included. Weight, .70 Lb.

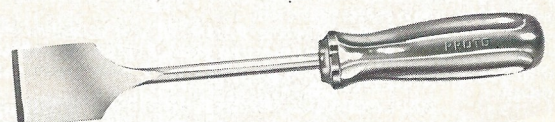


NO. 2335 VALVE GUIDE CLEANER



Turning a nut adjusts the five flexible blades to any valve guide size. Length, 9 $\frac{3}{4}$ ". Weight, .10 Lb. Individual blade—2335 B

NO. 2336 GASKET SCRAPER

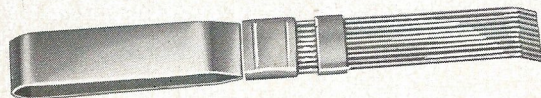


For removing shellacked gaskets, scraping carbon and many other uses. Has handle of tough, fire-resistant plastic, and round blade of special alloy steel. Lgh., 10 $\frac{3}{8}$ ". Blade width, 1 $\frac{1}{2}$ ". Wt., .41 Lb.

SPECIAL-PURPOSE TOOLS

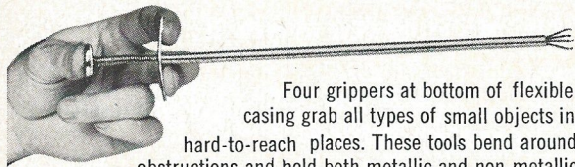
[CONT.]

NO. 2337 FLEXIBLE CARBON SCRAPER



Sliding band regulates the flexibility of the ten round spring steel blades. Length, 9". Width, 1". Weight, .30 Lb.

NOS. 2340, 2341, 2342 & 2343 GRAB-ALL RETRIEVING AND HOLDING TOOLS



Four grippers at bottom of flexible casing grab all types of small objects in hard-to-reach places. These tools bend around obstructions and hold both metallic and non-metallic items—two big advantages over magnet rod types. Grab-Alls are useful for holding small things, for fishing objects out of garbage disposers, sinks and drains, and for retrieving nuts, cotter keys, etc., that fall into tight spots.

NO.	LENGTH	WT., LBS.
2340†	12"	.12
2341†	15"	.14

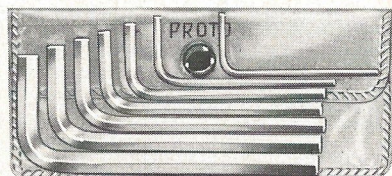
NO.	LENGTH	WT., LBS.
2342*	18"	.16
2343†	24"	.20

†Meets Federal Specs. except for length.

*Meets Federal Specs. Mil.-F-4571-B, Type I, Class 2, Size 1.

NO. 4977 WRENCH SET... HOLLOW HEAD SCREW

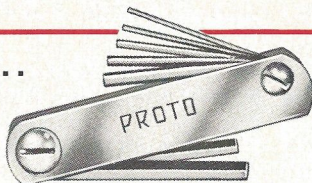
Handy 2" x 4 1/2" plastic case, containing seven plated L-type hexagon keys for turning Allen head, socket head and hollow head screws. Sizes—5/64 (fits No. 8 set screws), 3/32 (No. 10), 1/8 (1/4"), 5/32 (3/16"), 3/16 (3/8"), 7/32 (7/16") and 1/4 (1/2"). Weight, .21 Lb.



NO. 4978 WRENCH SET... HOLLOW HEAD SCREW

Pocket-knife type 3" metal case, with seven hex keys for Allen head, socket head, and hollow head screws. Sizes—.050

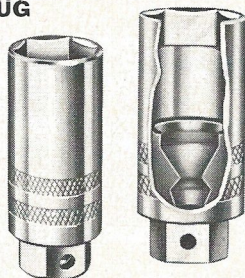
(fits No. 4 set screws), 1/16 (Nos. 5 and 6), 5/64 (No. 8), 3/32 (No. 10), 1/8 (1/4"), 5/32 (3/16") and 3/16 (3/8"). Weight, .16 Lb.



5026HP & 5326HP SPARK PLUG HOLDING SOCKETS

Patented rubber insert (shown in the cutaway view) holds any 14-mm. spark plug securely in socket during installation or removal.

This feature speeds work on late V8 overhead valve engines and helps prevent the burning of fingers on hot manifolds. Sockets with a 13/16" hex. opening are available in 3/8" and 1/2" square drives. Both sockets have a 3/4" hex. on drive end for turning with a flat wrench. Handy knurling on outside of socket for hand installation and removal. Made of special alloy steel and chrome plated. A big advantage of the rubber insert is that it securely holds the spark plug for hard-to-reach plug locations.



REPLACEABLE RUBBER INSERT

NO.	DRIVE SIZE	NOMINAL OPENING	LENGTH	WT., LBS.	SPARE IN- SERV NO.
5026HP	3/8"	13/16"	2 5/16"	.24	5026R
5326HP	1/2"	13/16"	2 5/16"	.22	5026R

For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

NOS. 5244, 5444, 5446 HEAVY-DUTY SCREWDRIVER SOCKETS

For drag links and screw adjustments on steering assemblies, shock absorbers, starters, etc. Made from special alloy steel.

NO.	DRIVE	BIT SIZE	LENGTH	LBS.
5244	3/8"	5/8" x .116"	1 1/32"	.08
5444	1/2"	3/4" x .115"	1 7/32"	.14
5446	1/2"	1 1/16" x .154"	1 7/32"	.20



NOS. 6522 & 6523 CONNECTING ROD SOCKETS

Thin nose, hexagon, 1/2" drive sockets. No. 6523 is for Ford V8s and 6522 for La Salles and Cadillacs. Alloy steel.

NO.	OPENING	LENGTH	WT., LB.
6522	7/16"	1 5/8"	.13
6523	9/16"	1 7/16"	.11



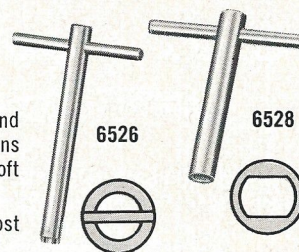
6522

6523

NOS. 6526 & 6528 CARBURETOR JET WRENCHES

No. 6526 (Wt., .07 Lb.) fits Holley and Chandler-Groves carburetors. Turns jets quickly, without damaging soft jet material.

No. 6528 (Wt., .06 Lb.) fits most Strombergs. Made of alloy steel.



6526

6528

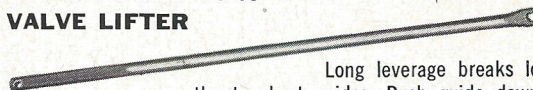
NO. 6535 DISTRIBUTOR POINT SOCKET

For late Chevrolets. Two prongs turn the housing terminal screw. Drive, 1/4". Length, 1 1/16". Made of alloy steel. Weight, .02 Lb.



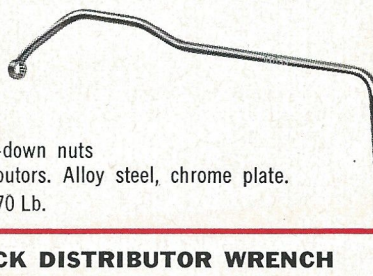
NO. 6539 FORD V8-85 VALVE LIFTER

Long leverage breaks loose the toughest guides. Push guide down to remove keeper, and pry to force out guide. Stock, 3/4". Length, 30". Alloy steel. Weight, 3.5 Lbs.



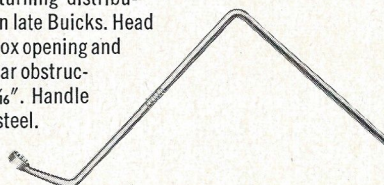
NO. 6540 UNIVERSAL DISTRIBUTOR WRENCH

New design 6540 especially for '57 Fords, but desirable wherever 1/2" hold-down nuts are used on distributors. Alloy steel, chrome plate. Length 17". Wt., .70 Lb.



NO. 6541 BUICK DISTRIBUTOR WRENCH

For reaching and turning distributor mounting bolt on late Buicks. Head has 12-point, 5/16" box opening and is offset 1 7/8" to clear obstructions. Height, 10 3/4". Handle length, 8". Alloy steel. Weight, .57 Lb.



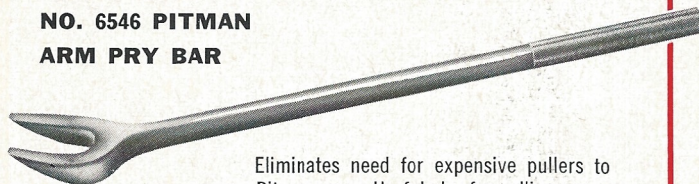
SPECIAL-PURPOSE TOOLS [CONT.]

NO. 6545 DRAG LINK & SHOCK ARM TOOL



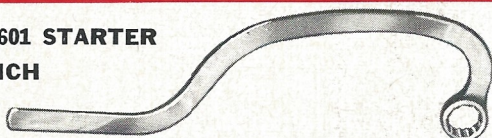
Slim, tapered fork is readily inserted to separate shock links and tie rods. Length, 16". Fork opening, $2\frac{1}{32}$ ". Made of special alloy steel. Weight, 2.3 Lbs.

NO. 6546 PITMAN ARM PRY BAR



Eliminates need for expensive pullers to remove Pitman arms. Useful also for pulling gears, bearings and pulleys, and lifting blocks and heavy assemblies. Length, 20". Fork opening, $1\frac{1}{4}$ ". Of alloy steel. Wt., 2.8 Lbs.

NO. 6601 STARTER WRENCH



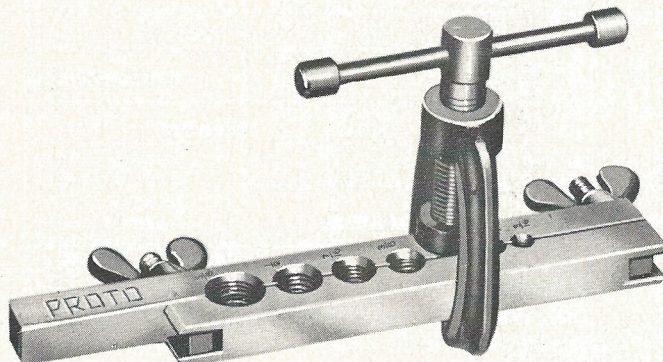
For Plymouth, Dodge, De Soto and Chrysler cars. Clears objects when removing or replacing starter. Has $\frac{5}{8}$ " box opening. Length, $9\frac{3}{4}$ ". Alloy steel. Weight, .35 Lb.

NO. 350 TUBING CUTTER

An increasingly useful tool for automotive and truck mechanics, plumbers, etc. Cuts metal tubing or conduit from $\frac{1}{8}$ " to $1\frac{1}{8}$ " O.D. Husky screw and alloy frame, plus scientifically heat treated alloy steel blade gives clean, fast cuts and long service.

Has special flare-cut-off rollers which permit cutting near flared tubing ends as well as on straight tubing sections. Retractable Reamer Blade on frame.

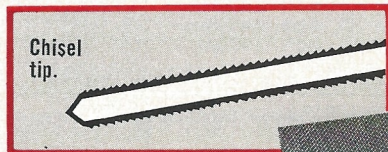
Wt. .75 lb.



NO. 351 TUBING FLARING TOOL with slip-on yoke

A complete flaring tool for tubing sizes $\frac{3}{16}$ " through $\frac{5}{8}$ ". Each part in the assembly is carefully finished to best perform its special function... Flaring Yoke is malleable iron of proper toughness; tapered cone is hardened and polished, and rides on a ball-bearing; all steel parts are bright plated. Yoke Frame is black wrinkle finish. Wt. 1.90 lbs.

NO. 2302 IGNITION POINT FILE, 5"

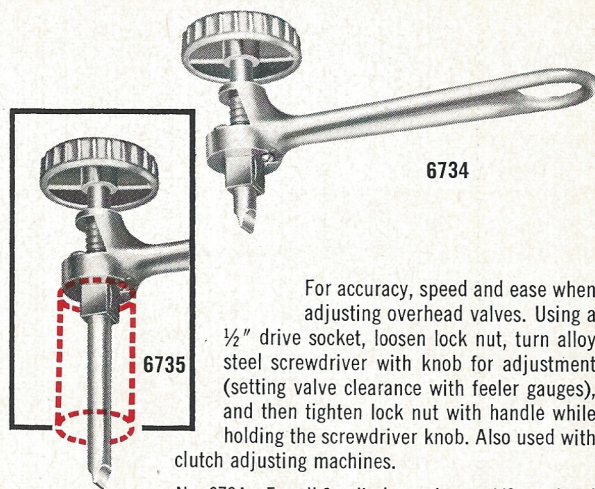


Chisel tip.

Fine tungsten Point File for spark plugs, distributor points and other electrical contact points. Chisel tip for entering gaps and slots. Smooth extended grip. Wt. .015 lb.



NO. 6734 OVERHEAD VALVE ADJUSTERS

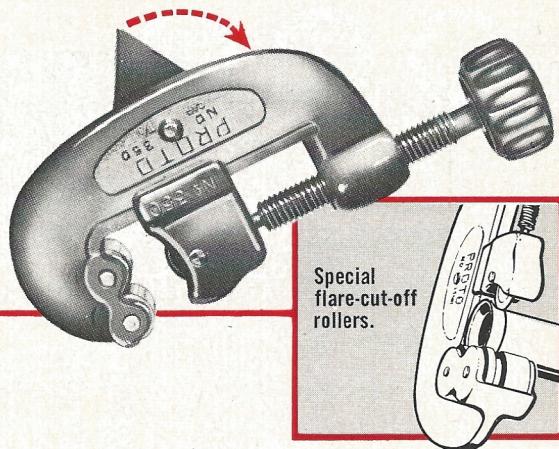


For accuracy, speed and ease when adjusting overhead valves. Using a $\frac{1}{2}$ " drive socket, loosen lock nut, turn alloy steel screwdriver with knob for adjustment (setting valve clearance with feeler gauges), and then tighten lock nut with handle while holding the screwdriver knob. Also used with clutch adjusting machines.

No. 6734—For all 6-cylinder and many V8 overhead valve engines without hydraulic lifters. Has clearance for adjusting valves under fire wall on late 6-cylinder Chevrolets. Maximum bit length, $1\frac{3}{8}$ ". Weight, .33 Lb.

No. 6734S—Spare Screwdriver Blade with Knob. No. 6734H—Spare Socket-Holding Spring with Screw.

No. 6735—For late Ford, Mercury and other overhead valve engines. Maximum bit length of $3\frac{5}{32}$ " clears exhaust manifolds. Weight, .36 Lb. No. 6735S—Spare Screwdriver Blade with Knob.

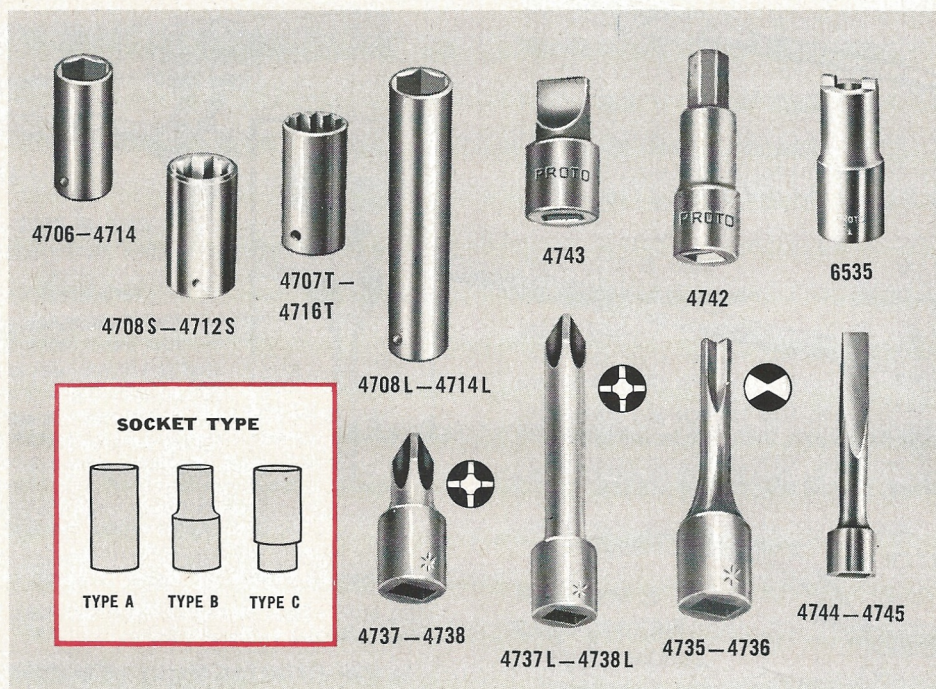


Special flare-cut-off rollers.

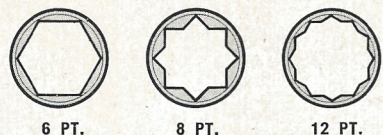
1/4"

SQUARE DRIVE MIDGET SOCKET WRENCHES

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS



Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.



PROTO sockets are made from PROTOLOY® special alloy steel chrome plated, and have thin walls to get at hard-to-reach nuts.

Midget sockets are specifically designed for all kinds of light work where small nuts and bolts may be turned, such as the repair of carburetors, distributors, radios, instruments, etc. They are accurately made from alloy steels for super strength—and scientifically heat treated to insure long, dependable service.

REGULAR LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4706	B	3/16"	7/8"	.02
4707	B	7/32"	7/8"	.02
4708	B	1/4"	7/8"	.02
4709	A	9/32"	7/8"	.02
4710	A	5/16"	7/8"	.02
4711	A	11/32"	7/8"	.03
4712	A	3/8"	7/8"	.03
4714	C	7/16"	7/8"	.04

REGULAR LENGTH SOCKETS DOUBLE HEX. (12-PT.)

4707T	B	7/32"	7/8"	.02
4708T	B	1/4"	7/8"	.02
4709T	A	9/32"	7/8"	.02
4710T	A	5/16"	7/8"	.02
4711T	A	11/32"	7/8"	.03
4712T	A	3/8"	7/8"	.03
4714T	C	7/16"	7/8"	.04
4716T	C	1/2"	7/8"	.05

REGULAR LENGTH SOCKETS DBL. SQUARE (8-PT.)

4708S	A	1/4"	7/8"	.02
4710S	A	5/16"	7/8"	.05
4712S	A	3/8"	7/8"	.05

DEEP LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4708L	B	1/4"	2"	.04
4709L	A	9/32"	2"	.04
4710L	A	5/16"	2"	.04
4711L	A	11/32"	2"	.07
4712L	A	3/8"	2"	.09
4714L	A	7/16"	2"	.11

● For Power Sockets, See Pages 51 thru 56.
For Metric Sockets, See Page 36.

SCREWDRIVER AND SPECIAL SOCKETS

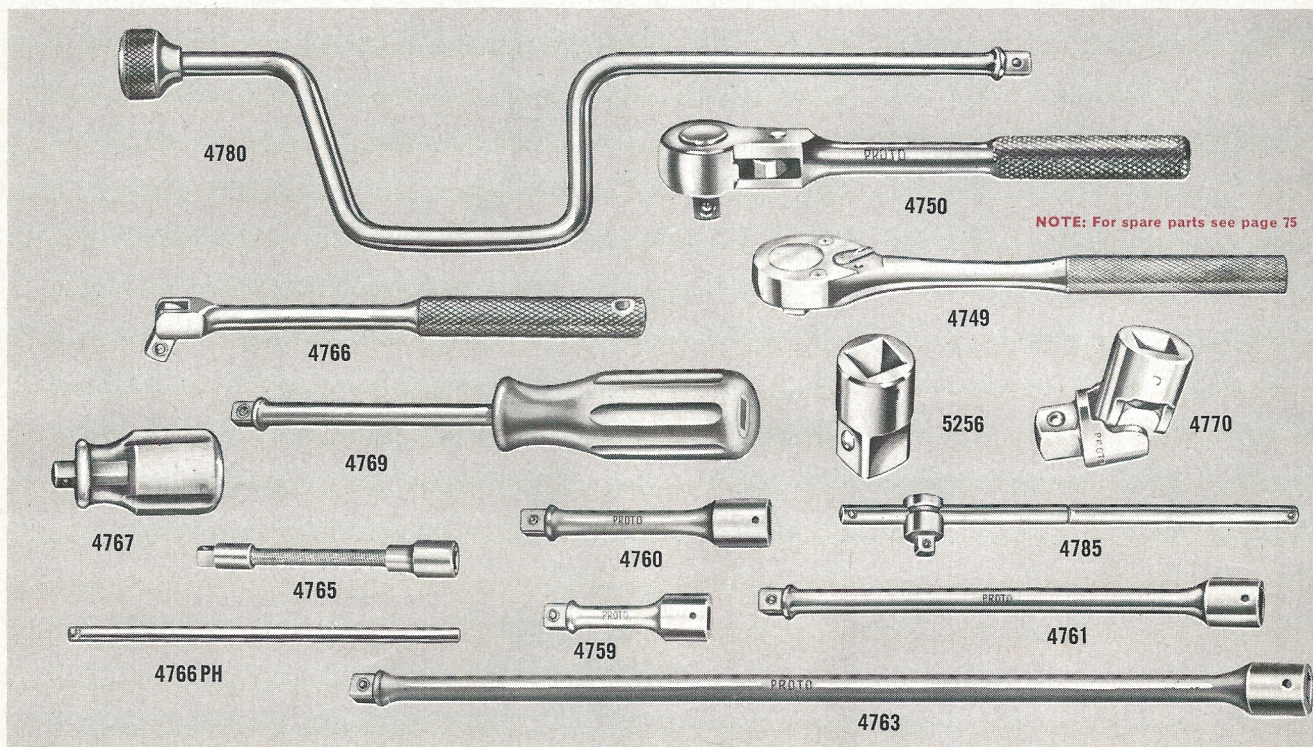
NO.	DESCRIPTION	LENGTH	WT., LBS.
4735	Clutch Head 5/32" Bit	1 1/2"	.04
4736	Clutch Head 3/16" Bit	1 1/2"	.04
4737	Screwdriver, Phillips No. 1 Bit	1 1/16"	.02
4737L	Screwdriver, Phillips No. 1 Bit	2 1/16"	.03
4738	Screwdriver, Phillips No. 2 Bit	1 1/16"	.02
4738L	Screwdriver, Phillips No. 2 Bit	2 1/16"	.03
†4742	Hollow-Head Type, 1/4" Hex. Bit	1 13/32"	.03
†4743	Screwdriver, 3/8" x .062" Bit	1"	.02
4744	Screwdriver, 1/16" x .030" Bit	1 11/16"	.03
4745	Screwdriver, 1/4" x .030" Bit	2 7/8"	.04
‡6535	Screwdriver, Two-Prong Type	1 1/16"	.02

†Used in Automatic Transmission Sets. See Page 26. ‡Chevrolet Distributor Socket. See Page 38

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

1/4" SQUARE DRIVE MIDGET SOCKET WRENCH HANDLES, ATTACHMENTS AND SETS

1/4"



NOTE: For spare parts see page 75

Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers," Bulletin No. 5918.

HANDLES

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4749	Reversible Ratchet *	5"	.21
4750	Reversible Ratchet *	4 1/2"	.18
4766	Hinge Handle	5 3/8"	.15
4766PH	Pin Handle	4"	.03
4767	Stubby Socket Driver, Plastic Handle	2 5/32"	.07
4769	Regular Socket Driver, Plastic Handle	6 1/8"	.16
4780	Speed Handle	16"	.39
4785	Sliding Bar T Handle	4 1/2"	.08

ATTACHMENTS

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4759	Extension	2"	.04
4760	Extension	3 1/2"	.05
4761	Extension	6"	.08
4763	Extension	14"	.18
4765	Flexible Extension	6"	.08
4770	Universal Joint	1 7/32"	.04
5256	Adapter, 1/4" F., 3/8" M.	1 5/16"	.03
5255	Adapter, 3/8" F., 1/4" M.	1 5/16"	.05

* Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

RATCHET REPAIR KITS



4749 RK FOR 1/4" DRIVE
5249 RK FOR 3/8" DRIVE
5449 RK FOR 1/2" DRIVE
5450 RK FOR 3/4" DRIVE

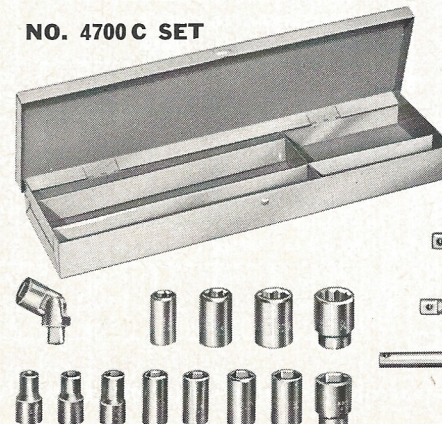
Each "RK" Kit contains 1 cover, 2 cover screws, 1 dog left, 1 dog right, 1 reversing assembly, 2 springs, 1 wheel w/ plug.

NO. 4700 B SET



Here are complete sets of handy midget tools, designed for all kinds of light work where small nuts and bolts must be turned.

NO. 4700 C SET



CONTENTS OF SETS

NO.	DESCRIPTION	SET 4700 B	SET 4700 C
4706	Socket, 6-Point, 3/16" Opening		1
4707	Socket, 6-Point, 7/32" Opening	1	1
4708	Socket, 6-Point, 1/4" Opening	1	1
4709	Socket, 6-Point, 9/32" Opening	1	1
4710	Socket, 6-Point, 5/16" Opening	1	1
4711	Socket, 6-Point, 11/32" Opening	1	1
4712	Socket, 6-Point, 3/8" Opening	1	1
4714	Socket, 6-Point, 7/16" Opening	1	1
4708S	Socket, 8-Point, 1/4" Opening	1	1
4710S	Socket, 8-Point, 5/16" Opening	1	1
4712S	Socket, 8-Point, 3/8" Opening		1
4716T	Socket, 12-Point, 1/2" Opening		1
4749	Ratchet	1	1
4759	Extension, 2"		1
4761	Extension, 6"		1
4766	Hinge Handle		1
4769	Plastic Handle	1	1
4770	Universal Joint		1
4785	Sliding Bar Handle	1	1
4795	Steel Box, 6 3/4" x 2 1/4" x 1"	1	
4796	Metal Box		1

Boxes available separately, see page 70.

Weight of Set, 1.20 Lbs.

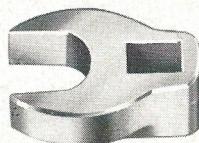
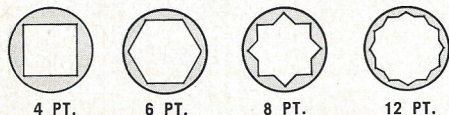
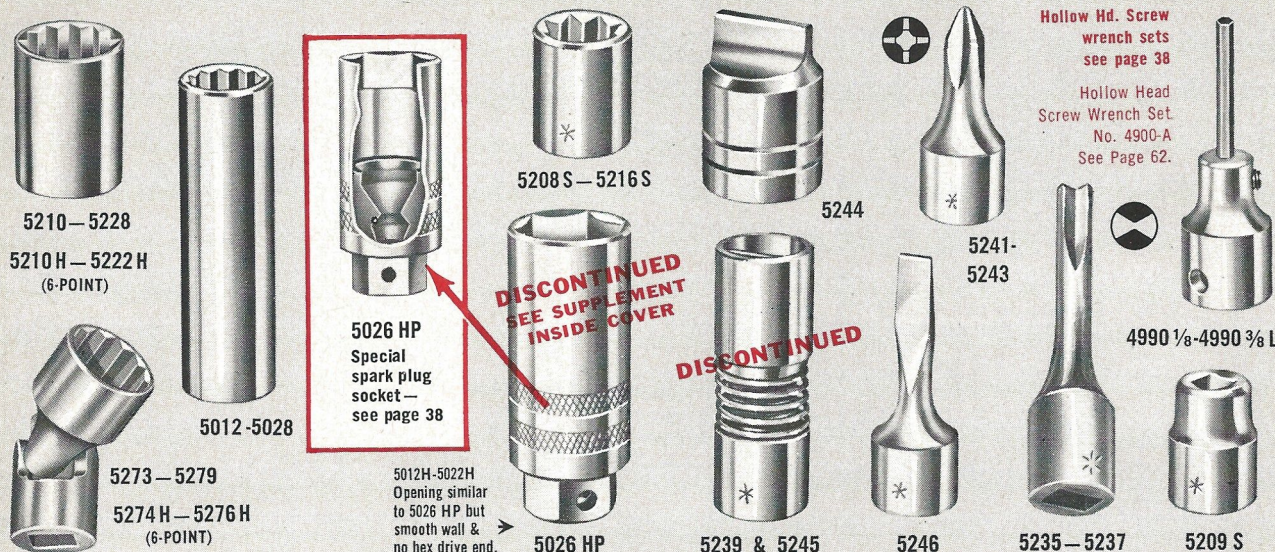
For Larger Set No. 4700-D, See Page 62.

3/8"

SQUARE DRIVE CUB SOCKET WRENCHES

Fedl. Specs.: GGG-W-641b. "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS



4912-4944

PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts.

REGULAR LENGTH SOCKETS

Double Hexagon (12-Point)

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5210	5/16"	1"	.04
5212	3/8"	1"	.04
5214	7/16"	1"	.04
5216	1/2"	1"	.05
5217	17/32"	1"	.06
5218	9/16"	1"	.06
5219	19/32"	1"	.07
5220	5/8"	1"	.07
5222	11/16"	1 1/16"	.09
5224	3/4"	1 1/16"	.09
5225	25/32"	1 3/16"	.12
5226	13/16"	1 3/16"	.12
5228	7/8"	1 3/16"	.15

Hexagon (6-Point)

5210H	5/16"	1"	.04
5212H	3/8"	1"	.05
5214H	7/16"	1"	.04
5216H	1/2"	1"	.05
5218H	9/16"	1"	.06
5220H	5/8"	1"	.07
5222H	11/16"	1 1/16"	.10

Double Square (8-Point)

5208S	1/4"	1"	.04
5210S	5/16"	1"	.04
5212S	3/8"	1"	.06
5214S	7/16"	1"	.07
5216S	1/2"	1"	.10

Square (4-Point)

5209S	9/32"	1"	.05
-------	-------	----	-----

For Buick Dynaflo Torque Converter Drain Plug.

DEEP LENGTH SOCKETS

Double Hexagon (12-Point)

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5012	3/8"	2 1/8"	.10
5014	7/16"	2 1/8"	.08
5016	1/2"	2 1/8"	.10
5018	9/16"	2 1/8"	.14
5020	5/8"	2 1/8"	.15
5022	11/16"	2 1/8"	.19
5024	3/4"	2 1/8"	.21
5026	13/16"	2 1/2"	.28
5028	7/8"	2 1/2"	.27

Hexagon (6-Point)

5012H	3/8"	2 1/8"	.10
5014H	7/16"	2 1/8"	.10
5016H	1/2"	2 1/8"	.11
5018H	9/16"	2 1/8"	.14
5020H	5/8"	2 1/8"	.16
5022H	11/16"	2 1/8"	.21
5026R	Rubber insert for 5026 HP		

UNIVERSAL SOCKETS

Double Hexagon (12-Point)

5273	3/8"	1 35/64"	.09
5274	7/16"	1 35/64"	.09
5275	1/2"	1 41/64"	.10
5276	9/16"	1 25/32"	.11
5277	5/8"	1 29/32"	.12
5278	11/16"	1 63/64"	.13
5279	3/4"	2 3/64"	.15

Hexagon (6-Point)

5274H	7/16"	1 35/64"	.09
5275H	1/2"	1 41/64"	.09
5276H	9/16"	1 25/32"	.11

For power sockets see pages 51 thru 56.

SCREWDRIVER SOCKETS

NO.	SIZE OF BIT	LENGTH	WT., LBS.
5235	Clutch Hd. 1/4" Bit	2"	.08
5236	Clutch Hd. 5/16" Bit	2"	.07
5237	Clutch Hd. 3/8" Bit	2"	.07
5240	5/16" x .040"	3 3/32"	.08
5241	Phillips No. 2	1 5/8"	.05
5242	Phillips No. 3	1 5/8"	.05
5243	Phillips No. 4	1 5/8"	.06
5244	1 1/16" x .116"	1 1/2"	.08
5246	1/4" x .030"	1 7/8"	.06
5239	5/16" x .063"	1 7/8"	.12
5245	7/16" x .051"	1 7/8"	.10

For Oil Pan Bolts. No. 5239 Fits 1940 and Later Model Chevrolets. No. 5245 Fits 1939 and Earlier Chevrolets.

HOLLOW HEAD SCREW SOCKETS

NO.	HEX. BIT SIZE	USABLE BIT LENGTH	OVER-ALL LGTH.	WT., LBS.	BIT ONLY NO.
4990 1/8	1/8"	1"	2 1/16"	.05	4980
4990 5/32	5/32"	1"	2 1/16"	.06	4981
4990 3/16	3/16"	1"	2 1/16"	.06	4982
4990 3/16L	3/16"	2"	3 1/16"	.07	4983
4990 7/32	7/32"	1"	2 5/32"	.08	4984
4990 1/4	1/4"	1"	2 5/32"	.09	4985
4990 1/4L	1/4"	1 1/2"	2 21/32"	.10	4986
4990 5/16	5/16"	1"	2 1/4"	.11	4987
4990 3/8	3/8"	1"	2 1/4"	.13	4988
4990 3/8L	3/8"	1 1/2"	3 15/16"	.14	4989

Catalog Number Includes Bit-Holding Socket and Bit. Sockets Without Bits Are Not Available. Replacement Bits Only May Be Ordered by the Numbers in the Right Column.

4990 3/16L is for GM Automatic Transmissions, 4990 1/4L is for Chevrolet Camber Adjustment, and 4990 3/8L is for Ford brakes and Ford, Edsel, Mercury differential filler plugs.

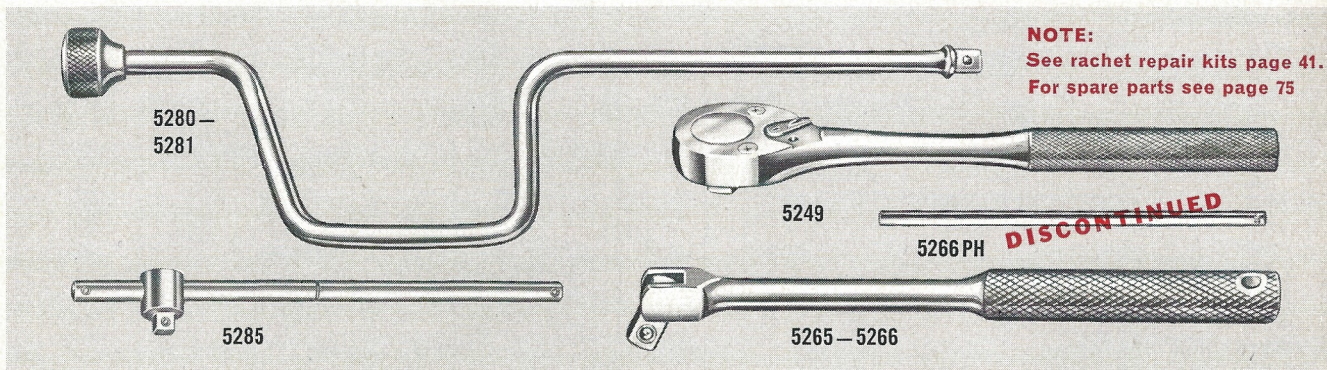
CROWFOOT WRENCHES

Reach starters. Do jobs that normally need special tools.

NO.	NOMINAL OPENING SIZE	TOTAL LENGTH	WT., LBS.
4912	3/8"	1 1/8"	.05
4914	7/16"	1 1/8"	.05
4916	1/2"	1 1/8"	.05
4918	9/16"	1 13/32"	.08
4920	5/8"	1 3/8"	.08
4922	11/16"	1 3/8"	.08
4924	3/4"	1 21/32"	.14
4926	13/16"	1 21/32"	.12
4928	7/8"	1 21/32"	.12
4932	1"	1 7/8"	.12
4940	1 1/4"	2 1/32"	.23
4944	1 3/8"	2"	.21

3/8" SQUARE DRIVE CUB SOCKET WRENCH HANDLES, ATTACHMENTS AND SETS

3/8"



NOTE:
See ratchet repair kits page 41.
For spare parts see page 75

Proto handles and attachments permit a wide variety of drive combinations for fast and easy running of nuts and bolts on every job. They're made of special alloy steel, chrome plated, built for years of service.

Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES

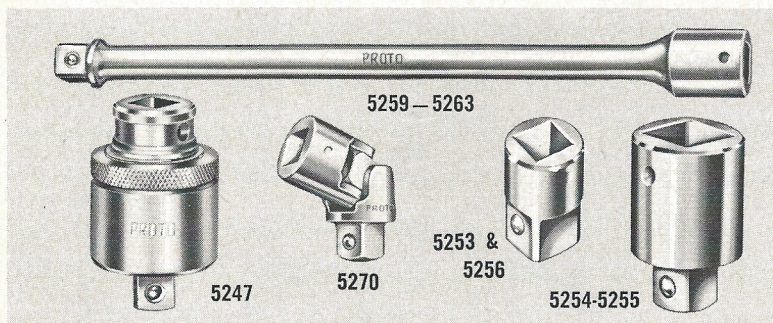
NO.	DESCRIPTION	LENGTH	WT., LBS.
5249	Reversible Ratchet	7"	.55
5265	Hinge Handle	7 3/8"	.39
5266	Hinge Handle	12"	.83
5266PH	Pin Handle	7 1/2"	.16
5280	Speed Handle	16 7/8"	.83
5281	Speed Handle	14 5/32"	.74
5285	Sliding Bar T Handle	8"	.31

NO. 5000B DEEP SOCKET SET

Includes the following nine extra deep 12-point sockets, packed in cardboard box.

(One socket illustrated.)

NO.	OPENING SIZE	NO.	OPENING SIZE
5012	3/8"	5022	1 1/16"
5014	7/16"	5024	3/4"
5016	1/2"	5026	1 3/16"
5018	9/16"	5028	7/8"
5020	5/8"		Weight, 1.60 Lbs.



Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

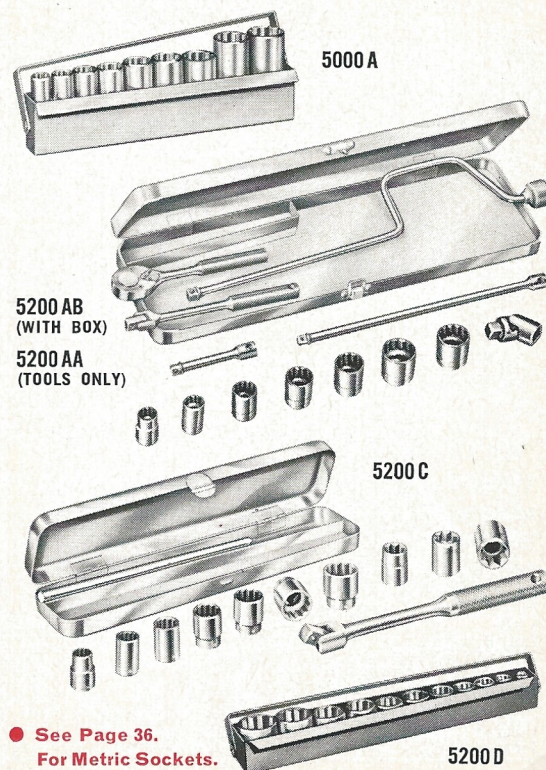
ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5247	Rachet	2"	.33
5256	Adapter, 1/4" Female, 3/8" Male	1 5/16"	.03
5255	Adapter, 3/8" Female, 1/4" Male	6 3/64"	.05
5253	Adapter, 3/8" Female, 1/2" Male	1 5/32"	.07
5254	Adapter, 1/2" Female, 3/8" Male	1 21/64"	.10
5259	Extension Bar	1 3/4"	.09
5260	Extension Bar	3 1/2"	.13
5261	Extension Bar	7 1/2"	.25
5262	Extension Bar	12"	.38
5263	Extension Bar	17 3/16"	.53
5270	Universal Joint	1 5/8"	.10

CONTENTS OF SETS 5000 A, 5200 AA, 5200 AB, 5200 C & 5200 D

NO.	DESCRIPTION	SET 5000 A	SET 5200 AA	SET 5200 AB	SET 5200 C	SET 5200 D
5012	Deep Socket, 12-Point, 3/8" Opening	1				
5014	Deep Socket, 12-Point, 7/16" Opening	1				
5016	Deep Socket, 12-Point, 1/2" Opening	1				
5018	Deep Socket, 12-Point, 9/16" Opening	1				
5020	Deep Socket, 12-Point, 5/8" Opening	1				
5022	Deep Socket, 12-Point, 1 1/16" Opening	1				
5024	Deep Socket, 12-Point, 3/4" Opening	1				
5026	Deep Socket, 12-Point, 1 3/16" Opening	1				
5028	Deep Socket, 12-Point, 7/8" Opening	1				
5096	Metal Tray	1				
5210	Socket, 12-Point, 5/16" Opening					1
5212	Socket, 12-Point, 3/8" Opening		1	1	1	1
5212S	Socket, 8-Point, 3/8" Opening				1	
5214	Socket, 12-Point, 7/16" Opening		1	1	1	1
5214S	Socket, 8-Point, 7/16" Opening				1	
5216	Socket, 12-Point, 1/2" Opening		1	1	1	1
5216S	Socket, 8-Point, 1/2" Opening				1	
5218	Socket, 12-Point, 9/16" Opening		1	1	1	1
5219	Socket, 12-Point, 1 1/32" Opening					1
5220	Socket, 12-Point, 5/8" Opening		1	1	1	1
5222	Socket, 12-Point, 1 1/16" Opening		1	1	1	1
5224	Socket, 12-Point, 3/4" Opening		1	1	1	1
5226	Socket, 12-Point, 1 3/16" Opening					1
5228	Socket, 12-Point, 7/8" Opening					1
5249	Reversible Ratchet, 7" Long		1	1		
5260	Extension Bar, 3 1/2" Long		1	1		
5262	Extension Bar, 12" Long		1	1		
5265	Hinge Handle, 7 3/8" Long		1	1	1	
5266PH	Pin Handle, 7 1/2" Long				1	
5270	Universal Joint		1	1		
5280	Speed Handle, 16 7/8" Long		1	1		
5292	Metal Tray					1
5294	Box 10 1/4" x 2 1/4" x 1 1/4"				1	
5295	Box 18 1/2" x 5 1/4" x 1 1/2"			1		
Weight of Sets		2.02 Lbs.	2.69 Lbs.	4.6 Lbs.	2.1 Lbs.	1.12 Lbs.

Boxes available separately, see page 70



● See Page 36.
For Metric Sockets.

1/2"

SQUARE DRIVE STANDARD SOCKET WRENCHES AND HANDLES



DEEP LENGTH SOCKETS DOUBLE HEXAGON (12-POINT)

NEW NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5316	B	1/2"	3 1/4"	.25
5318	B	9/16"	3 1/4"	.27
5320	B	5/8"	3 1/4"	.28
5322	A	1 1/16"	3 1/4"	.34
5324	A	3/4"	3 1/4"	.40
5326	A	1 3/16"	3 1/4"	.40
5328	A	7/8"	3 1/4"	.44
5330	A	1 5/16"	3 1/4"	.52
5332	A	1"	3 1/4"	.60
5334	A	1 1/16"	3 1/4"	.68
5336	A	1 1/8"	3 1/4"	.75

UNIVERSAL SOCKETS DOUBLE HEXAGON (12-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5475	B	1/2"	2 9/16"	.25
5476	B	9/16"	2 11/16"	.24
5477	B	5/8"	2 13/16"	.25

† Use hexagon (6-point) deep length socket wrenches Nos. 5326H or 5326HP, which have maximum clearance for 14 mm. spark plugs.

SCREWDRIVER SOCKETS

Used on drag links and large screws of many assemblies.

NO.	BIT SIZE	TOTAL LENGTH	WT., LBS.
5444	3/4" x .115"	1 7/32"	.14
5446	1 1/16" x .154"	1 7/32"	.20

HOLLOW HEAD SCREW SOCKETS

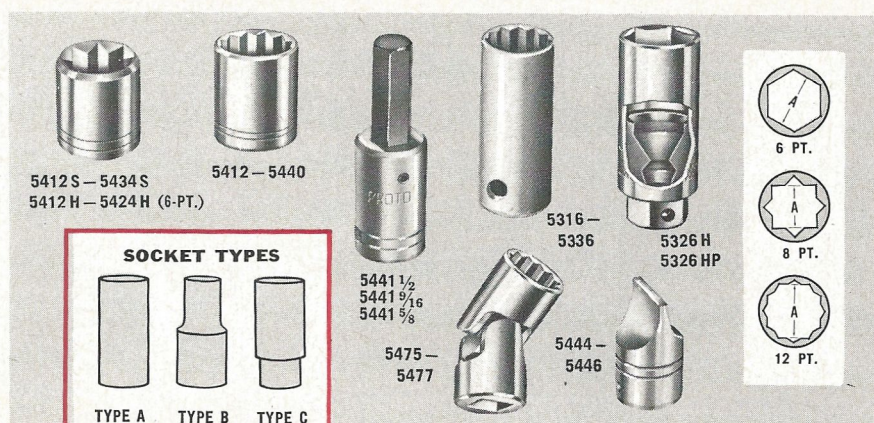
HEX BIT NO.	BIT SIZE	TOTAL LENGTH	WT., LBS.
5441 1/2	1/2"	3 1/8"	.37
5441 9/16	9/16"	3 3/8"	.48
5441 5/8	5/8"	3 3/8"	.52

For Set No. 4900A, see Page 62.

DEEP LENGTH SOCKETS HEXAGON (6-POINT)

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5326H	1 3/16"	3 1/4"	.32
5326HP	1 3/16"	2 17/32"	.22

No. 5326HP—special type with rubber insert for holding plug is listed on Page 38. It helps prevent burning of fingers and speeds changing spark plugs.



Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

PROTOLOY® special alloy steel, chrome plated, scientifically heat treated

REGULAR LENGTH SOCKETS HEXAGON (6-POINT)

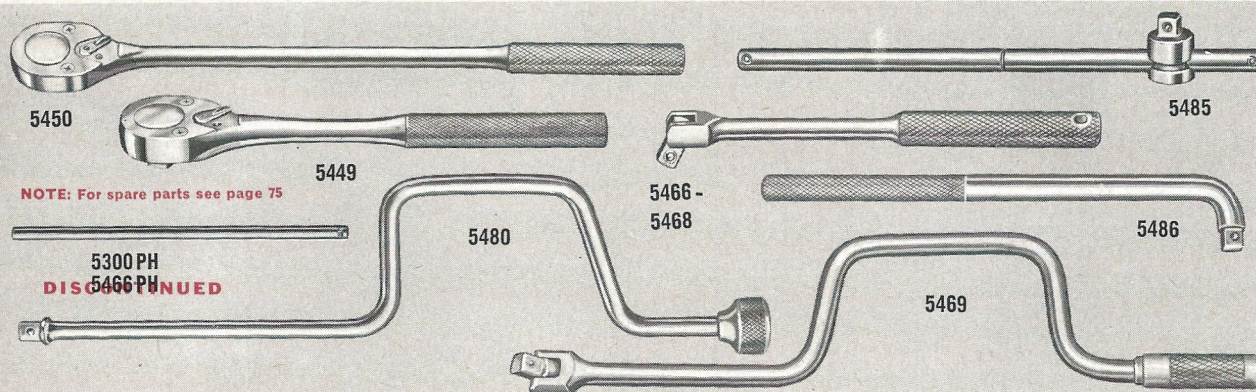
NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412H	B	3/8"	1 7/16"	.09
5414H	B	7/16"	1 7/16"	.10
5416H	B	1/2"	1 7/16"	.12
5418H	B	9/16"	1 1/2"	.13
5420H	A	5/8"	1 1/2"	.12
5422H	A	1 1/16"	1 1/2"	.17
5424H	A	3/4"	1 1/2"	.21

REGULAR LENGTH SOCKETS DOUBLE SQUARE (8-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412S	B	3/8"	1 7/16"	.12
5414S	B	7/16"	1 7/16"	.14
5416S	A	1/2"	1 7/16"	.14
5418S	A	9/16"	1 1/2"	.20
5420S	A	5/8"	1 1/2"	.23
5422S	A	1 1/16"	1 1/2"	.30
5424S	A	3/4"	1 9/16"	.37
5426S	A	1 3/16"	1 5/8"	.42
5428S	A	7/8"	1 5/8"	.52
5432S	A	1"	1 3/4"	.76
5434S	A	1 1/16"	1 13/16"	.91

REGULAR LENGTH SOCKETS DOUBLE HEXAGON (12-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412	B	3/8"	1 7/16"	.09
5414	B	7/16"	1 7/16"	.09
5416	B	1/2"	1 7/16"	.10
5418	B	9/16"	1 1/2"	.13
5419	B	19/32"	1 1/2"	.13
5420	A	5/8"	1 1/2"	.15
5421	A	21/32"	1 1/2"	.15
5422	A	1 1/16"	1 1/2"	.17
5424	A	3/4"	1 1/2"	.20
5425	A	25/32"	1 1/2"	.22
5426	A	13/16"	1 1/2"	.20
5428	A	7/8"	1 9/16"	.30
5429	A	29/32"	1 9/16"	.34
5430	A	15/16"	1 9/16"	.33
5431	A	31/32"	1 9/16"	.34
5432	A	1"	1 9/16"	.38
5434	A	1 1/16"	1 5/8"	.42
5436	A	1 1/8"	1 3/4"	.50
5438	A	1 3/16"	1 3/4"	.56
5440	A	1 1/4"	1 3/4"	.61



NOTE: For spare parts see page 75

These husky PROTO handles are made from PROTOLOY® special alloy steel and are chrome plated. Because of the several types available all kinds of jobs can be handled efficiently.

NOTE: See page 41 for Ratchet Repair Kit.

Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES

NO.	DESCRIPTION	LENGTH	WT., LBS.
5300PH	Pin Handle, 3/8" Stock, for Turning Deep Sockets	8"	.25
5466PH	Pin Handle, 3/8" Stock, for Turning Hinge Handles	11 1/2"	.35
5449	Reversible Ratchet	10"	1.28
5450	Long Reversible Ratchet	15 3/4"	1.82
5466	Hinge Handle, with Hole for Inserting Pin Handle	10"	1.16
5467	Hinge Handle, with Hole for Inserting Pin Handle	15"	1.56
5468	Hinge Handle, with Hole for Inserting Pin Handle	17 7/8"	1.67

HANDLES (cont.)

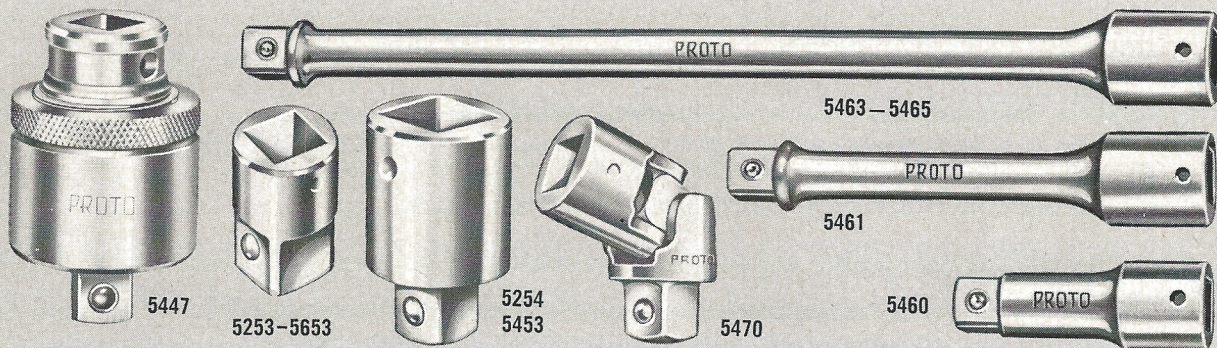
NO.	DESCRIPTION	LENGTH	WT., LBS.
5469	Speed Hinge Handle, 9/16" Stock, 6 1/2" Swing Diam., Ball-Brg. Knurled Grip	18"	1.86
5480	Speed Handle, 1/2" Stock, 7" Swing Diam., Ball-Bearing Knurled Grip	18"	1.52
5485	Sliding Bar T Handle, with Ball to Hold Plug in Tee or Offset Position	12 1 5/16"	.94
5486	Ell Handle	13 1/2"	1.30

NOTE: For metric sockets see page 36. For thin nose connecting rod sockets see page 38. For power sockets, pages 51-56.

1/2" SQUARE DRIVE STANDARD SOCKET WRENCH ATTACHMENTS AND SETS

Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

1/2"



Made from PROTOLOY® special alloy steel, chrome plated, designed for precise and complete interchangeability with range of combinations for special jobs.

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5253	Adapter, 3/8" Female, 1/2" Male	1 5/32"	.07
5254	Adapter, 1/2" Female, 3/8" Male	1 25/64"	.10
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	1 7/8"	.38
● 5447	"Ratchetor" Ratcheting Attachment	2 9/16"	.73
5460	Extension Bar	2 1/2"	.24
5461	Extension Bar	5"	.35
5463	Extension Bar	10"	.63
5464	Extension Bar	18"	1.03
5465	Extension Bar	36"	3.1
5470	Universal Joint	2 29/64"	.26

● For description of ratchetor see bottom of page 46.

CONTENTS OF SETS

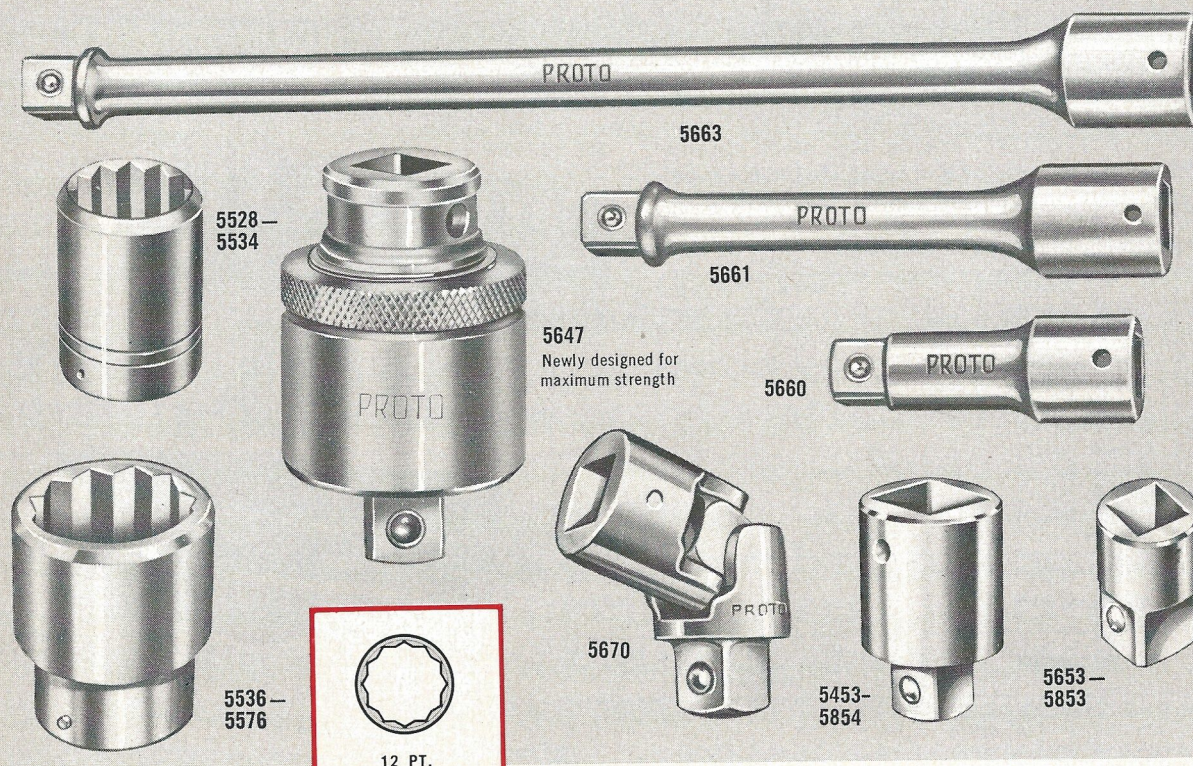
NO.	DESCRIPTION	SET 5300-A	SET 5300-B	SETS 5400-AB *5400-AA	SET 5400-C	SET 5400-OC	SET 5400-F
5316	Deep Socket, 12-Point, 1/2" Opening	1	1				
5318	Deep Socket, 12-Point, 9/16" Opening	1	1				
5320	Deep Socket, 12-Point, 5/8" Opening	1	1				
5322	Deep Socket, 12-Point, 11/16" Opening	1	1				
5324	Deep Socket, 12-Point, 3/4" Opening	1	1				
5326	Deep Socket, 12-Point, 13/16" Opening	1	1				
5328	Deep Socket, 12-Point, 7/8" Opening	1	1				
5330	Deep Socket, 12-Point, 15/16" Opening	1	1				
5332	Deep Socket, 12-Point, 1" Opening	1	1				
5334	Deep Socket, 12-Point, 1 1/16" Opening	1					
5336	Deep Socket, 12-Point, 1 1/8" Opening	1					
5393	Metal Tray (.94 lbs.)	1					
5414	Socket, 12-Point, 7/16" Opening			1	1	1	1
5416	Socket, 12-Point, 1/2" Opening			1	1	1	1
5418	Socket, 12-Point, 9/16" Opening			1	1	1	1
5419	Socket, 12-Point, 19/32" Opening					1	1
5420	Socket, 12-Point, 5/8" Opening			1	1	1	1
5421	Socket, 12-Point, 11/16" Opening					1	
5422	Socket, 12-Point, 11/16" Opening			1	1	1	1
5424	Socket, 12-Point, 3/4" Opening			1	1	1	1
5425	Socket, 12-Point, 25/32" Opening					1	1
5426	Socket, 12-Point, 13/16" Opening			1	1	1	1
5428	Socket, 12-Point, 7/8" Opening			1	1	1	1
5430	Socket, 12-Point, 15/16" Opening			1	1	1	1
5431	Socket, 12-Point, 31/32" Opening					1	
5432	Socket, 12-Point, 1" Opening			1	1	1	1
5434	Socket, 12-Point, 1 1/16" Opening					1	1
5436	Socket, 12-Point, 1 1/8" Opening					1	1
5438	Socket, 12-Point, 1 3/16" Opening					1	
5440	Socket, 12-Point, 1 1/4" Opening					1	1
5449	Reversible Ratchet, 10" Long			1		1	
5460	Extension Bar, 2 1/2" Long					1	
5461	Extension Bar, 5" Long			1		1	
5463	Extension Bar, 10" Long			1		1	
5464	Extension Bar, 18 1/2" Long				1	1	
5467	Hinge Handle, 15" Long			1			
5468	Hinge Handle, 17 7/8" Long					1	
5470	Universal Joint			1		1	
5480	Speed Handle, 18" Long			1		1	
5493	Metal Tray (1.0 lbs.)						1
5494	Steel Box 17"x 3"x 2" (1.86 lbs.)				1		
5495	Steel Box 17 1/4"x 2" (4.6 lbs.)			1		1	
5496	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5497	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5498	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5499	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5500	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5501	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5502	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5503	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5504	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5505	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5506	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5507	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5508	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5509	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5510	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5511	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5512	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5513	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5514	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5515	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5516	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5517	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5518	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5519	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5520	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5521	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5522	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5523	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5524	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5525	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5526	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5527	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5528	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5529	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5530	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5531	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5532	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5533	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5534	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5535	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5536	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5537	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5538	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5565	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5567	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5571	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5572	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5575	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5579	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5580	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5581	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5582	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5599	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5600	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5601	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5621	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5624	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5626	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5627	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5636	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5639	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5641	Steel Box 17 1/4"x 2" (4.6 lbs.)						
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5649	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5650	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5651	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5652	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5653	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5654	Steel Box 17 1/4"x 2" (4.6 lbs.)						
5655	Steel Box 17 1/4"x 2" (4.6 lbs.)						

3/4

SQUARE DRIVE HEAVY-DUTY SOCKET WRENCHES AND ATTACHMENTS



PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts. They are used by mechanics and industrial workers who need strength, power, speed and safe operation on really tough jobs. They are essential for the maintenance and installation of heavy machinery and for the repair of trucks, buses, ground service equipment, automobiles, tractors and farm implements. They provide maximum strength with minimum weight and are the perfect wrenches to break loose frozen bolts and nuts on heavy equipment.



REGULAR LENGTH SOCKETS DOUBLE HEXAGON (12-POINT)

NO.	NOMINAL OPENING SIZE	INSIDE CLEAR- ANCE	OUTSIDE DIAM- ETER	TOTAL LENGTH	WT., LBS.	NO.	NOMINAL OPENING SIZE	INSIDE CLEAR- ANCE	OUTSIDE DIAM- ETER	TOTAL LENGTH	WT., LBS.
5528	7/8"	1.000"	1.313"	2"	.31	5550	1 1/16"	2.750"	2.135"	2 5/8"	1.29
5530	1 1/16"	1.000"	1.420"	2"	.38	5552	1 5/8"	2.750"	2.260"	2 5/8"	1.49
5532	1"	1.125"	1.490"	2"	.47	5554	1 11/16"	2.750"	2.385"	2 3/4"	1.80
5534	1 1/16"	1.125"	1.572"	2"	.49	5556	1 3/4"	2.750"	2.385"	2 3/4"	1.80
5536	1 1/8"	1.562"	1.635"	2 3/16"	.60	5558	1 13/16"	2.750"	2.510"	2 7/8"	1.97
5538	1 3/16"	1.562"	1.697"	2 1/4"	.67	5560	1 7/8"	2.750"	2.635"	3"	2.31
5540	1 1/4"	1.562"	1.760"	2 1/4"	.71	5564	2"	2.750"	2.760"	3 1/8"	2.77
5542	1 3/16"	1.750"	1.885"	2 5/16"	.96	5568	2 1/8"	3.000"	2.947"	3 1/4"	3.10
5544	1 3/8"	1.875"	1.947"	2 5/16"	1.00	5570	2 3/16"	3.000"	3.010"	3 1/4"	3.25
5546	1 7/16"	1.875"	2.010"	2 3/8"	1.14	5572	2 1/4"	3.125"	3.156"	3 3/8"	3.50
5548	1 1/2"	2.750"	2.072"	2 1/2"	1.17	5576	2 3/8"	3.125"	3.250"	3 5/8"	3.62

For Power
and
Impact
Sockets,
See Pages
51-56.

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	1 7/8"	.38
5853	Adapter, 3/4" Female, 1" Male	2 1/4"	.70
5854	Adapter, 1" Female, 3/4" Male	2 3/8"	1.34
†5647	"Ratchetor" Ratcheting Attachment	3 11/16"	2.5
5660	Extension Bar	5"	.91
5661	Extension Bar	8"	1.36
5663	Extension Bar	16"	2.2
5670	Universal Joint	3 3/16"	.96

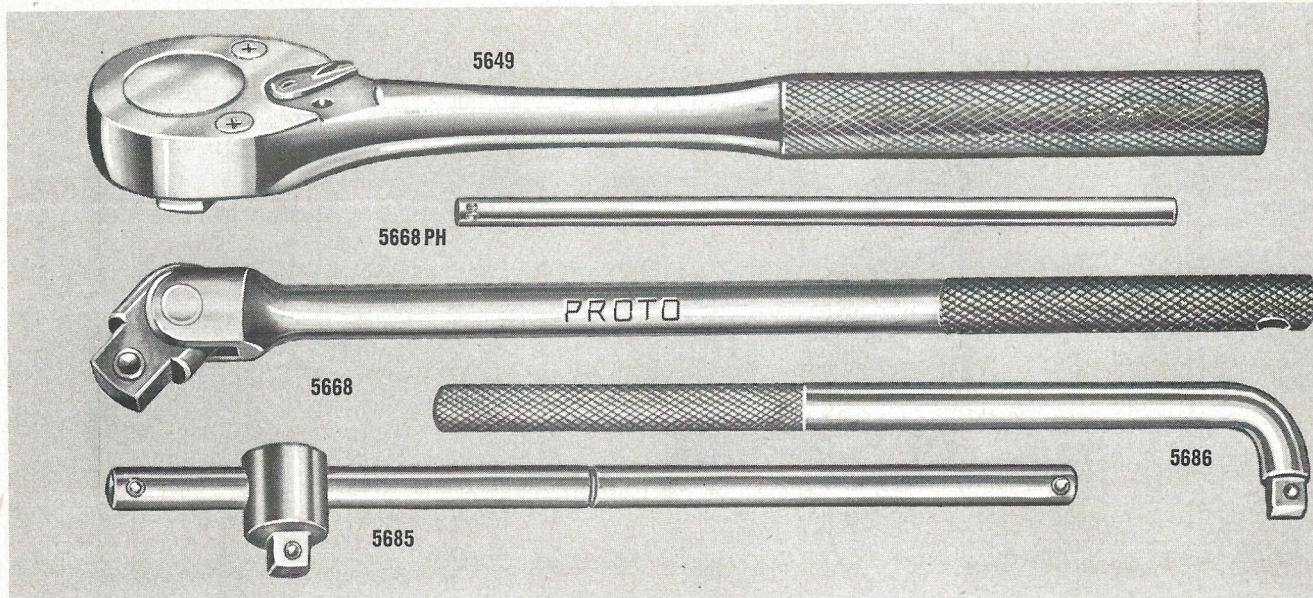
Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.

†Converts any 3/4" square drive non-ratcheting handle or attachment into a ratcheting device. It is used mainly with a hinge handle, hinge handle plus extension bar or a torque wrench. The "Ratchetor" is a simple, positive device, huskily built for high torque strength, yet compact for ample clearance. It has very little backdrag.

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

3/4" SQUARE DRIVE HEAVY-DUTY SOCKET WRENCH HANDLES AND SETS

3/4"



Made from fine PROTOLOY® steel, heat treated scientifically to provide great strength and toughness, and chrome plated to prevent rust and corrosion. PROTO ratchets are famous for simple, trouble-free mechanism.

CONTENTS OF NO. 5500 NR SET

NO.	DESCRIPTION
5534	Socket, 12-Point, 1 1/16" Opening
5536	Socket, 12-Point, 1 1/8" Opening
5540	Socket, 12-Point, 1 1/4" Opening
5542	Socket, 12-Point, 1 5/16" Opening
5546	Socket, 12-Point, 1 7/16" Opening
5548	Socket, 12-Point, 1 1/2" Opening
5552	Socket, 12-Point, 1 5/8" Opening
5556	Socket, 12-Point, 1 3/4" Opening
5649	Reversible Ratchet, 20" long
5661	Extension Bar, 8" Long
5685	Sliding Bar Handle, 18 1/2"
5695	Steel Box, 22 1/2" x 8" x 3 3/4"

CONTENTS OF NO. 5500 A SET

NO.	DESCRIPTION
5528	Socket, 12-Point, 7/8" Opening
5530	Socket, 12-Point, 1 5/16" Opening
5532	Socket, 12-Point, 1" Opening
5534	Socket, 12-Point, 1 1/16" Opening
5536	Socket, 12-Point, 1 1/8" Opening
5538	Socket, 12-Point, 1 1/4" Opening
5540	Socket, 12-Point, 1 1/2" Opening
5542	Socket, 12-Point, 1 5/16" Opening
5544	Socket, 12-Point, 1 3/8" Opening
5546	Socket, 12-Point, 1 7/16" Opening
5548	Socket, 12-Point, 1 1/2" Opening
5550	Socket, 12-Point, 1 9/16" Opening
5552	Socket, 12-Point, 1 5/8" Opening
5554	Socket, 12-Point, 1 11/16" Opening
5556	Socket, 12-Point, 1 3/4" Opening
5558	Socket, 12-Point, 1 13/16" Opening
5560	Socket, 12-Point, 1 7/8" Opening
5564	Socket, 12-Point, 2" Opening
5568	Socket, 12-Point, 2 1/8" Opening
5570	Socket, 12-Point, 2 3/16" Opening
5572	Socket, 12-Point, 2 1/4" Opening
5576	Socket, 12-Point, 2 3/8" Opening
5649	Reversible Ratchet, 20" Long
5660	Extension Bar, 5" Long
5661	Extension Bar, 8" Long
5663	Extension Bar, 16" Long
5668	Hinge Handle, 22" Long
5670	Universal Joint
5685	Sliding Bar Handle, 18 1/2"
5696	Steel Box, 23 1/2" x 9 1/4" x 4"

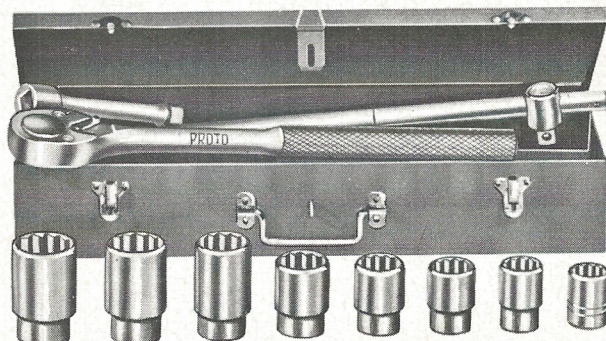
* Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES

NO.	DESCRIPTION	LGTH.	WT., LBS.
5649 *	Reversible Ratchet	20"	6.2
5668	Hinge Handle, with Hole for inserting Pin Handle	22"	3.8
5668PH	Pin Handle, 1/2" Stock	12"	.62
5685	Sliding Bar T Handle, with Ball to hold Plug in Tee or Offset Position	18 1/2"	3.8
5686	Ell Handle	16"	4.2

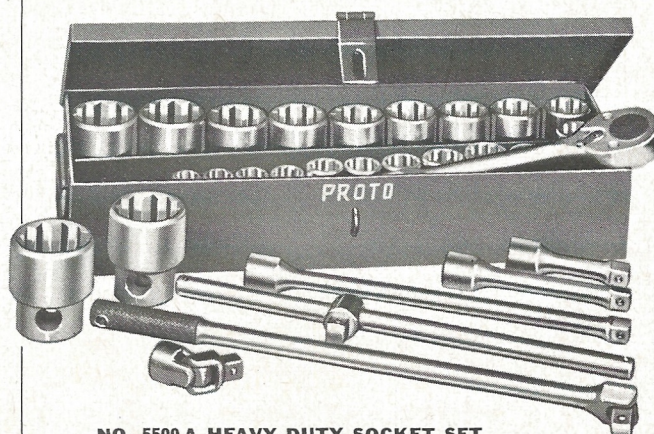
NOTE: For spare parts listing see page 75.

Fedl. Specs.:
GGG-W-641b.
See "Proto
Conversion to
Fedl. Stock
Numbers."
Bulletin No.
5918.



NO. 5500 NR BASIC HEAVY-DUTY SOCKET SET

Basic set of eight most-used sockets and attachments for work on heavy machinery and automatic equipment. 1 1/16" thru 1 3/4" openings. Wt., 30 Lbs.



NO. 5500 A HEAVY-DUTY SOCKET SET

Designed for tough service; this set contains a full line of 3/4" drive sockets; is ideal for all types of heavy work. It includes 22 sockets with openings from 7/8" to 2 3/8", three handles, three extension bars and a universal joint in a rugged steel box. Wt., 75 Lbs.

1"

SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCHES AND HANDLES

PROTO TOOLS
 PROFESSIONAL QUALITY TOOLS

PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated. They are specially heat treated and designed for great strength, for extra tough service. Stream-lined to reduce weight.

A big feature and safety factor is positive locking of socket to handle or attachment. Each male drive plug has a spring-pellet that snaps into a hole in the socket, acting as a retaining pin. To release, simply push pin provided in each socket.



5752—5812

NOTE: Hole drilled through socket to accommodate No. 5884 bar.

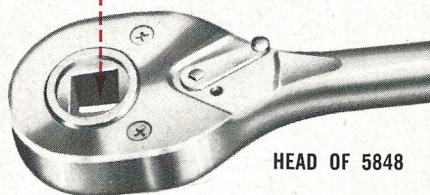
REGULAR LENGTH SOCKETS DOUBLE HEXAGON (12-POINT)

NO.	NOMINAL OPEN. SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5752	1 5/8"	2.250"	2.406"	3 1/4"	1.73
5758	1 13/16"	2.375"	2.531"	3 5/16"	1.85
5760	1 7/8"	2.406"	2.593"	3 3/8"	1.94
5764	2"	2.468"	2.781"	3 7/16"	2.2
5770	2 3/16"	2.781"	3.031"	3 3/4"	3.1
5772	2 1/4"	2.812"	3.156"	3 13/16"	3.4
5776	2 3/8"	2.937"	3.281"	3 15/16"	3.9
5780	2 1/2"	3.000"	3.531"	4"	4.9
5782	2 9/16"	3.000"	3.531"	4"	4.6
5784	2 5/8"	3.125"	3.656"	4 1/8"	5.2
5788	2 3/4"	3.375"	3.843"	4 3/8"	6.2
5794	2 15/16"	3.625"	4.093"	4 5/8"	7.7
5796	3"	3.500"	4.156"	4 5/8"	8.0
5800	3 1/8"	3.875"	4.385"	4 7/8"	9.6
5812	3 1/2"	4.500"	4.750"	5 1/2"	15



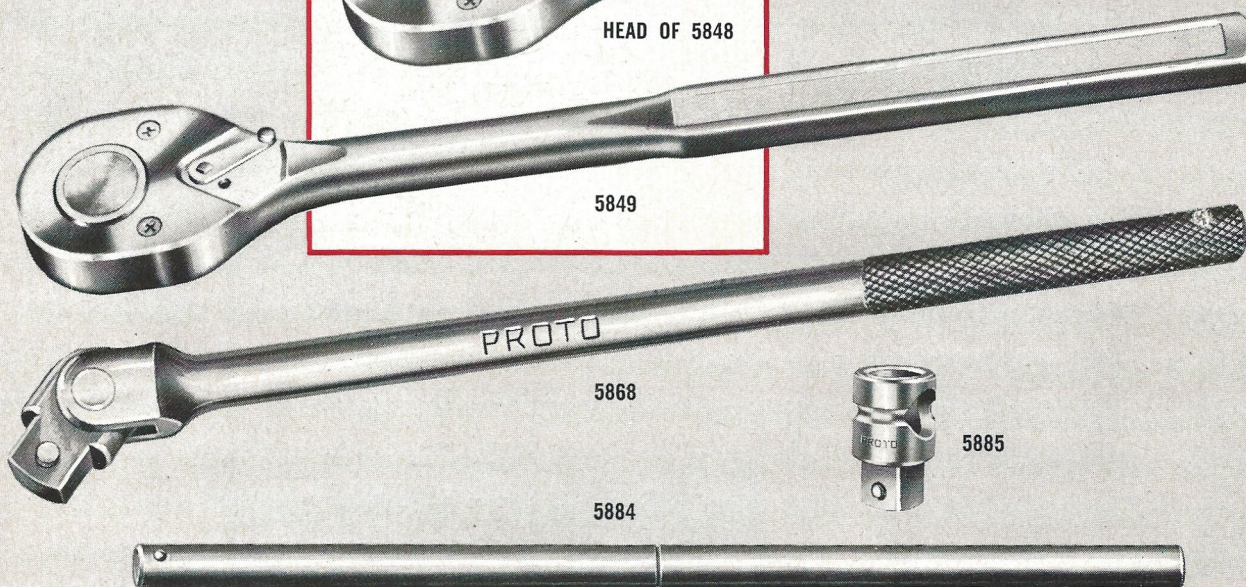
5852

5852 male adapter plug fits into 5848 reversible ratchet female wheel.



HEAD OF 5848

Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



HANDLES

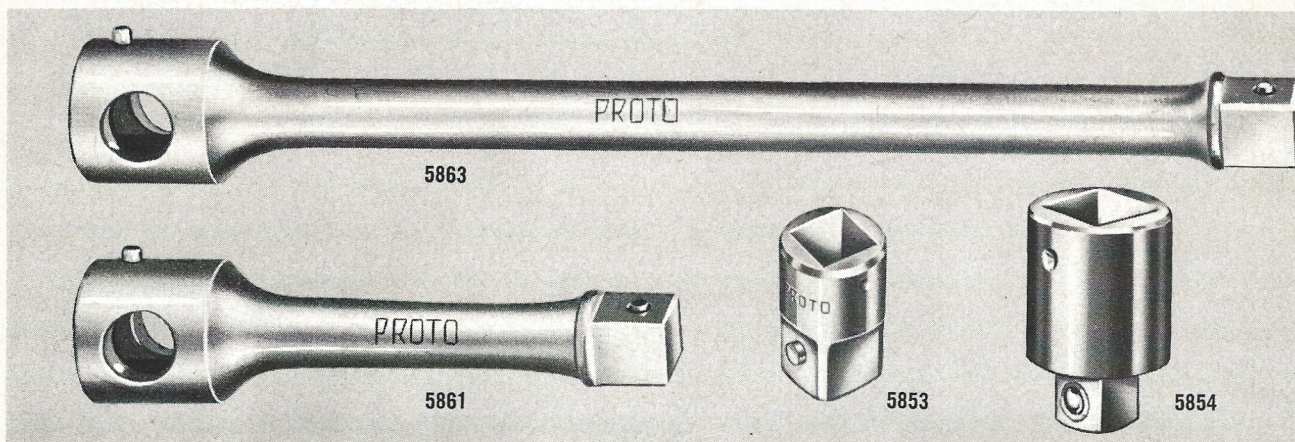
NO.	DESCRIPTION	LENGTH	WT., LBS.
5848	*Reversible Ratchet with 1" Square Female Wheel	26"	11
5849	*Reversible Ratchet, same as 5848, with 1" Square Male Adapter Plug 5852	26"	12
5852	Male Adapter Plug		.72
5868	Hinge Handle	26"	7.7
5884	Bar, 1" Stock, for Turning Sockets and for use with Plug 5885 to form Sliding Bar Handle	24"	5.3
5885	Sliding Plug, with Ball to hold in Tee or Offset Position on 5884 Bar	2 7/32"	1.40

* Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

NOTE: For spare parts listing see page 75.

1" SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCH ATTACHMENTS AND SETS

1"



Fedl. Specs.: GGG-W-641b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

Scientifically heat treated to provide great strength and toughness. Extra heavy-duty sockets and attachments have many applications in refineries, shipyards, power plants, railroad repair shops, plants with heavy machinery, etc.

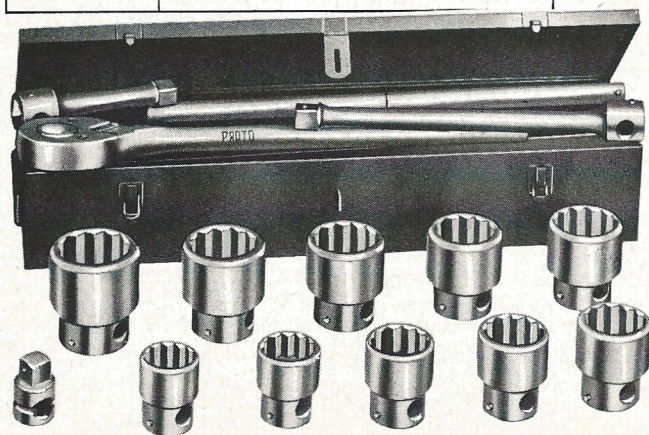
NO. 5700 AA EXTRA HEAVY-DUTY BASIC SOCKET SET

Ideal for really tough jobs that demand extra sturdy tools. It contains the ten most-used sockets, with openings from 1 7/8" to 2 1/2", plus a reversible ratchet, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 82 Lbs.

CONTENTS OF NO. 5700 AA SET

NO.	DESCRIPTION
5760	Socket, 12-Point, 1 7/8" Opening
5764	Socket, 12-Point, 2" Opening
5770	Socket, 12-Point, 2 3/16" Opening
5772	Socket, 12-Point, 2 1/4" Opening
5776	Socket, 12-Point, 2 3/8" Opening
5780	Socket, 12-Point, 2 1/2" Opening
5782	Socket, 12-Point, 2 5/16" Opening
5784	Socket, 12-Point, 2 5/8" Opening
5788	Socket, 12-Point, 2 3/4" Opening
5794	Socket, 12-Point, 2 15/16" Opening
5849	Reversible Ratchet, 26" Long
5861	Extension Bar, 8" Long
5863	Extension Bar, 17" Long
5884	Bar Handle, 24" Long
5885	Drive Plug for 5884 Bar
5894	Steel Box, 30" x 8 1/4" x 5"

SET NO.
5700 AA

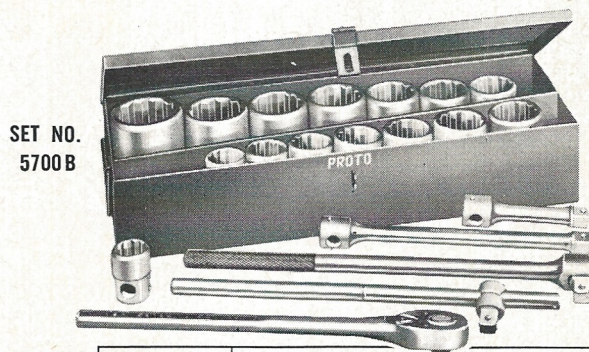


ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS
5853	Adapter, 3/4" Female, 1" Male	2 1/4"	.70
5854	Adapter, 1" Female, 3/4" Male	2 5/8"	1.34
5861	Extension Bar, with 1" Hole in Female End for 5884 Bar	8"	2.5
5863	Extension Bar, with 1" Hole in Female End for 5884 Bar	17"	4.5

NO. 5700 B EXTRA HEAVY-DUTY SOCKET SET

Contains full line of 1" drive sockets and attachments for installation and repair of heavy equipment. It includes fifteen sockets with openings from 1 5/8" to 3 1/2", a reversible ratchet, a hinge handle, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 150 Lbs.



SET NO.
5700 B

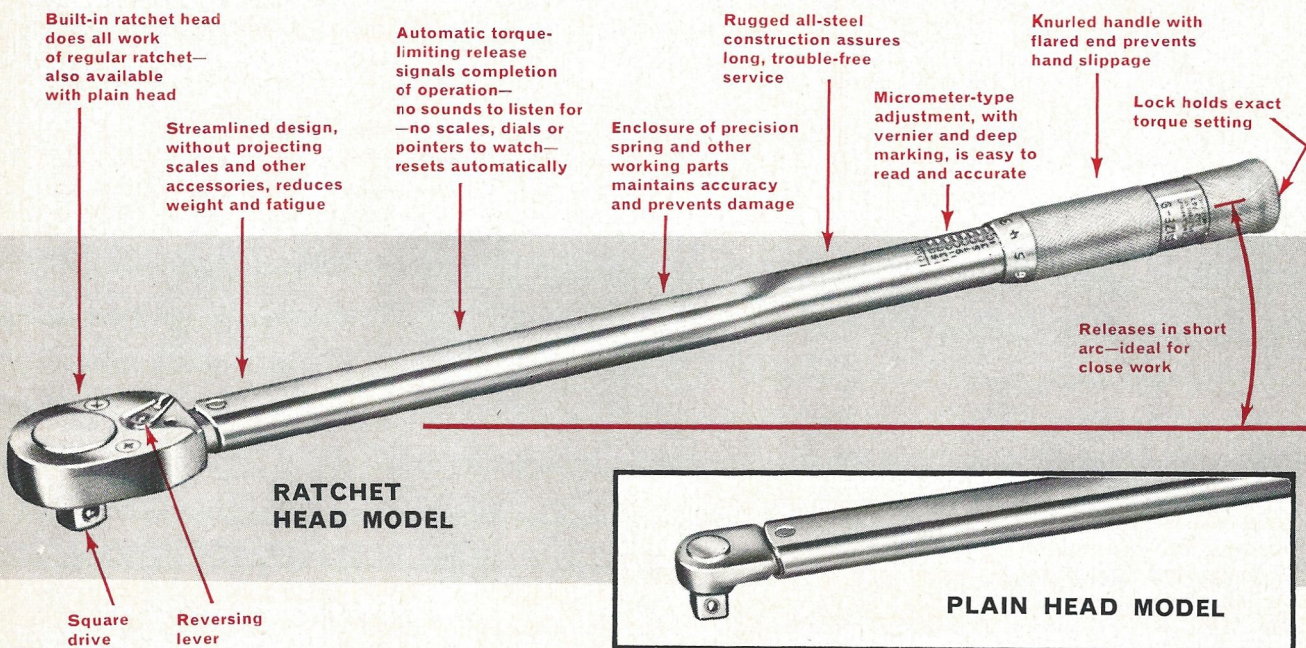
NO.	DESCRIPTION
5752	Socket, 12-Point, 1 5/8" Opening
5758	Socket, 12-Point, 1 11/16" Opening
5760	Socket, 12-Point, 1 7/8" Opening
5764	Socket, 12-Point, 2" Opening
5770	Socket, 12-Point, 2 3/16" Opening
5772	Socket, 12-Point, 2 1/4" Opening
5776	Socket, 12-Point, 2 3/8" Opening
5780	Socket, 12-Point, 2 1/2" Opening
5782	Socket, 12-Point, 2 5/16" Opening
5784	Socket, 12-Point, 2 5/8" Opening
5788	Socket, 12-Point, 2 3/4" Opening
5794	Socket, 12-Point, 2 15/16" Opening
5796	Socket, 12-Point, 3" Opening
5800	Socket, 12-Point, 3 1/8" Opening
5812	Socket, 12-Point, 3 1/2" Opening
5849	Reversible Ratchet, 26" Long
5861	Extension Bar, 8" Long
5863	Extension Bar, 17" Long
5868	Hinge Handle, 26" Long
5884	Bar Handle, 24" Long
5885	Drive Plug for 5884 Bar
5895	Steel Box, 31" x 12" x 5 3/4"

TORQUE-LIMITING WRENCHES

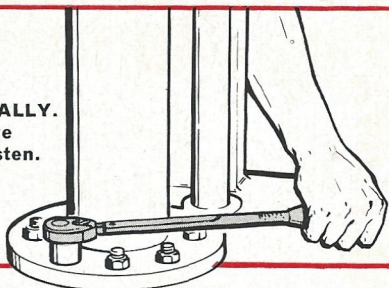
The PROTO torquer is faster, more efficient and much easier to use than others because it uses positive torque-LIMITING action (instead of devices that merely INDICATE what the torque SHOULD be).



You can set the PROTO wrench at the torque you want. It releases AUTOMATICALLY when that torque point is reached. No guessing. No staring at hard-to-read dials, no listening for hard-to-hear signals, no over-torquing, no under-torquing, no clumsy gadgets sticking out in your way. It's a great time saver.



It torques and releases **AUTOMATICALLY**. You don't have to watch or listen.



FOOT-POUND TORQUE-LIMITING WRENCHES

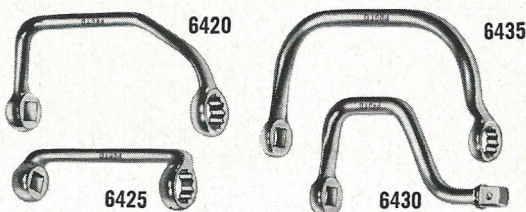
NO.	CAPACITY, FT.-LBS.	GRADUATIONS, FT.-LBS.	SQUARE DRIVE SIZE	STYLE OF HEAD	MAXIMUM DRIVE END WIDTH	OVER-ALL LENGTH	WT., LBS.
6006	5-75	1/2	3/8"	Ratchet	1 3/8"	14 1/16"	1.54
6008	5-75	1/2	1/2"	Ratchet	1 3/8"	14 1/16"	1.54
6015	10-150	1	1/2"	Plain	1"	16 3/4"	2.0
6016	10-150	1	1/2"	Ratchet	1 3/4"	18 1/4"	2.5
6017F	100-500	5	3/4"	Plain	2"	37"	9.3

INCH-POUND TORQUE-LIMITING WRENCHES

NO.	CAPACITY, IN.-LBS.	GRADUATIONS, IN.-LBS.	SQUARE DRIVE SIZE	STYLE OF HEAD	MAXIMUM DRIVE END WIDTH	OVER-ALL LENGTH	WT., LBS.
6061-2	5-150	2	1/4"	Plain	1"	8 5/8"	.85
6071F	1200-4800	50	3/4"	Plain	2"	37"	9.3

- You can use it in the dark, in blind spots, noisy places, on vibrating machinery, under water, in oil, or with heavy gloves on your hands.
- Turn the handle until its micrometer-type calibrations show torque you want. Attach socket or apply to nut or bolt. You pull right up to the required torque point without hesitation, eyestrain, earstrain or nervous tension. When the right torque is reached, the PROTO wrench releases automatically and signals you with its own mechanical action . . . tells you "when" clearly and unmistakably. After removal of handle pressure the wrench resets automatically to the same torque point.
- You can work a lot longer without getting tired because the PROTO torquer has no heavy accessories, no protruding devices interfering with operation. You don't have to struggle into position to read a dial or listen for a click.
- Tighten, loosen and torque, all with one tool. Ratchet models do the work of both a reversible ratchet wrench and a torque wrench. Saves a lot of time switching tools and sockets.
- The PROTO torquer gives you a longer lifetime of accurate, trouble-free operation because all working parts are enclosed, there are no protruding pointers or glass-faced dials to damage. All-steel construction is rugged, requires no special care.
- The PROTO torquer is one of the most versatile and useful tools in the manufacture and repair of instruments, aircraft parts, missiles, electronic equipment, automatic transmissions, heavy-duty work on diesel engines, cars, trucks, aircraft, power and construction equipment.

TORQUE WRENCH ADAPTERS



NO.	DESCRIPTION	LENGTH	LBS.
6420	3/4", 12-Point Box Opening, Wide Sweep	6 19/32"	.61
6425	3/4", 12-Point Box Opening, Close Sweep	5 17/32"	.43
6430	1/2" Square Male Plug	5 1/2"	.50
6435	1 1/16", 12-Point Box Opening	7 5/16"	.63

To clear obstructions in torquing head bolts. Many other uses. All are 1/2" drive.

6420—For Chev., Ford and other engines with 3/4" head bolts.

6425—For use on engines having 3/4" head bolts with limited clearance.

6430—For Powerglide Chevs. and general uses. Male square permits use of any size 1/2" dr. socket.

6435—For Ford products, Pontiac, Studebaker and other engines with 1 1/16" head bolts.

POWER AND IMPACT-TYPE SOCKET WRENCHES AND ATTACHMENTS

Engineered for Extra Rugged Service on All Types of Power Nut-Running and Impact Nut-Setting Wrenches, and for Heavy-Duty Use on Manual Attachments

PROTOLOY® alloy steels, scientific heat treatment and advanced design provide these sockets with great strength, toughness, snug fit, freedom from slipping, and maximum clearance for speed and ease in handling. All of these features mean a high safety factor, long life and low cost.

They fit most clutch-type power nut runners and electric or pneumatic impact nut setters. They also fit manual socket handles and therefore are ideal for many jobs demanding strength greater than provided in regular thinner-wall sockets.

PROTO power and impact sockets are widely used by all types of manufacturers for assembly and maintenance work, and are noted for their outstanding performance on production lines. They are popular also with mechanics for tractor, truck, bus, construction equipment and car repairing.

Finish is black oxide and lacquered.

All socket drive end walls are drilled for use on attachments with pellet-type locking device. All Proto power attachments employ the pellet type . . . a positive locking device for greater safety.

1/4" SQUARE DRIVE POWER SOCKETS

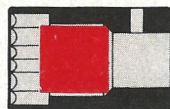
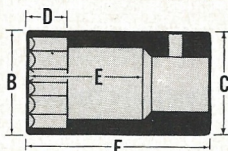
1/4"

HEX DRIVER EXTENSION



6 PT.

PKM socket, with shallow punching and magnet (red area) for holding self-tapping screws



REGULAR LENGTH
TYPE A



REGULAR LENGTH
TYPE B

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM.		OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
			NUT END(B)	DRIVE END(C)				
6906PK	B	3/16"	.359"	.447"	.125"	.500"	7/8"	.02
6908PK	A	1/4"	.447"	.447"	.125"	.500"	29/32"	.02
6909PK	B	9/32"	.468"	.510"	.125"	.500"	29/32"	.03
6910PK	A	5/16"	.510"	.510"	.125"	.500"	29/32"	.03
6912PK	A	3/8"	.572"	.572"	.156"	.500"	29/32"	.03

REGULAR LENGTH MAGNETIC SOCKETS FOR SELF- TAPPING SCREWS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM.		OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
			NUT END(B)	DRIVE END(C)				
6906PKM	B	3/16"	.359"	.447"	.125"	0	7/8"	.03
6908PKM	A	1/4"	.447"	.447"	.125"	0	29/32"	.03
6909PKM	B	9/32"	.468"	.510"	.125"	0	29/32"	.03
6910PKM	A	5/16"	.510"	.510"	.125"	0	29/32"	.04
6911PKM	A	11/32"	.541"	.541"	.140"	0	29/32"	.04
6912PKM	A	3/8"	.572"	.572"	.156"	0	29/32"	.04

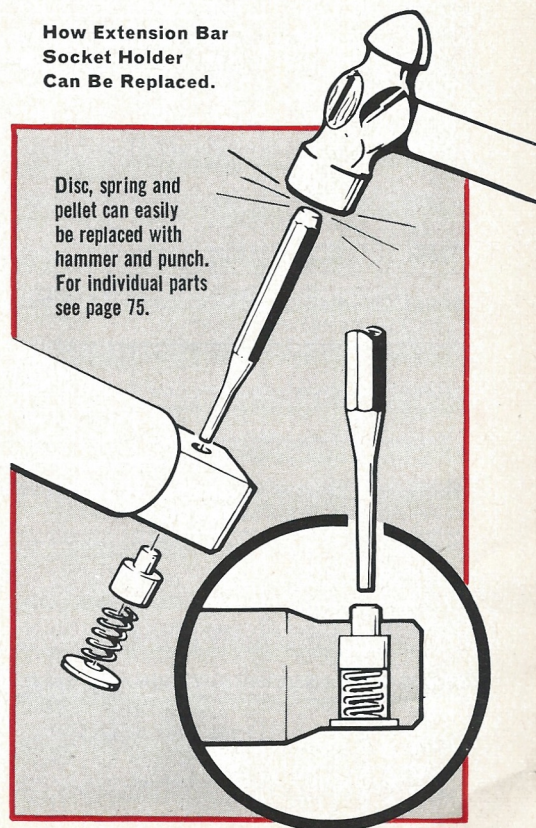
HEX DRIVER-EXTENSION

1/4" Square by 1/4" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7102	3/8"	2"	.03

How Extension Bar
Socket Holder
Can Be Replaced.

Disc, spring and
pellet can easily
be replaced with
hammer and punch.
For individual parts
see page 75.



3/8"

SQUARE DRIVE POWER SOCKETS



EXTENSION BAR



HEX DRIVER EXTENSION



REGULAR LENGTH
TYPE A



REGULAR LENGTH
TYPE B



DEEP LENGTH
TYPE A



DEEP LENGTH
TYPE B



7273-
7277



7270

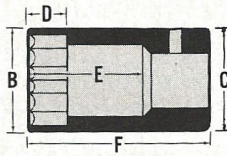
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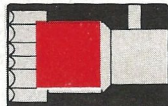
6 PT.



8 PT.



PKM socket, with shallow
punching and magnet (red area)
for holding self-tapping screws



Fedl. Specs.: GGG-W-660. See "Proto Conversion to
Fedl. Stock Numbers." Bulletin No. 5918.

REGULAR LENGTH SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210H	B	5/16"	.505"	.697"	.219"	.359"	1 5/16"	.07
7211H	B	11/32"	.517"	.697"	.281"	.359"	1 5/16"	.07
7212H	B	3/8"	.557"	.697"	.281"	.359"	1 5/16"	.05
7214H	B	7/16"	.638"	.697"	.281"	.437"	1 5/16"	.05
7216H	A	1/2"	.760"	.760"	.281"	.437"	1 5/16"	.06
7218H	A	9/16"	.791"	.791"	.281"	.437"	1 5/16"	.07
7219H	A	1 1/32"	.843"	.843"	.281"	.437"	1 5/16"	.07
7220H	A	5/8"	.885"	.885"	.281"	.437"	1 5/16"	.10
7222H	A	1 1/16"	.952"	.952"	.422"	.562"	1"	.16
7224H	A	3/4"	1.042"	1.042"	.422"	.562"	1"	.21

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210 PK	B	5/16"	.505"	.697"	.187"	.359"	1 5/16"	.05
7212 PK	B	3/8"	.630"	.760"	.187"	.359"	1 5/16"	.05
7214 PK	B	7/16"	.710"	.760"	.187"	.437"	1 5/16"	.08
7216 PK	B	1/2"	.705"	.760"	.281"	.437"	1 5/16"	.07

REGULAR LENGTH MAGNETIC SOCKETS FOR SELF- TAPPING SCREWS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210 PKM	B	5/16"	.497"	.697"	.125"	0	1 1/8"	.05
7212 PKM	B	3/8"	.620"	.760"	.156"	0	1 1/8"	.07
7214 PKM	B	7/16"	.697"	.760"	.187"	0	1 1/8"	.09
7216 PKM	B	1/2"	.715"	.760"	.218"	0	1 1/8"	.08

REG. LENGTH SOCKETS—DOUBLE SQUARE (8-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210S	B	5/16"	.635"	.697"	.125"	.359"	7/8"	.07
7212S	B	3/8"	.666"	.697"	.187"	.359"	7/8"	.07
7214S	A	7/16"	.760"	.760"	.250"	.437"	1"	.07
7216S	A	1/2"	.885"	.885"	.250"	.437"	1"	.10

DEEP LENGTH SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7010H	B	5/16"	.522"	.697"	.312"	.953"	1 1/2"	.10
7011H	B	11/32"	.522"	.697"	.312"	.953"	1 1/2"	.10
7012H	B	3/8"	.564"	.697"	.312"	.953"	1 1/2"	.11
7014H	B	7/16"	.643"	.697"	.359"	1.000"	1 1/2"	.09
7016H	B	1/2"	.728"	.760"	.406"	1.000"	1 1/2"	.09
7018H	A	9/16"	.791"	.791"	.453"	1.000"	1 1/2"	.12
7020H	A	5/8"	.885"	.885"	.500"	1.000"	1 1/2"	.14
7022H	A	1 1/16"	.947"	.947"	.546"	1.000"	1 1/2"	.20
7024H	A	3/4"	1.041"	1.041"	.594"	1.000"	1 1/2"	.24

BALL-TYPE UNIVERSAL SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7273		3/8"	.598"	.853"	.312"	.406"	2 3/16"	.24
7274		7/16"	.682"	.853"	.343"	.437"	2 3/32"	.25
7275		1/2"	.746"	.853"	.375"	.500"	2 1/4"	.25
7276		9/16"	.826"	.853"	.422"	.500"	2 9/32"	.26
7277		5/8"	.884"	.853"	.437"	.562"	2 11/32"	.26

NO. 7270 UNIVERSAL JOINT

Ball-type. Length, 2 3/8". Weight, .28 Lb. For replacement parts see page 75.

HEX DRIVER-EXTENSIONS 3/8" Square by 7/16" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7111	9/16"	2 3/4"	.14
7113	9/16"	5"	.30

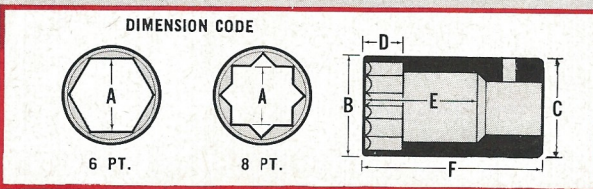
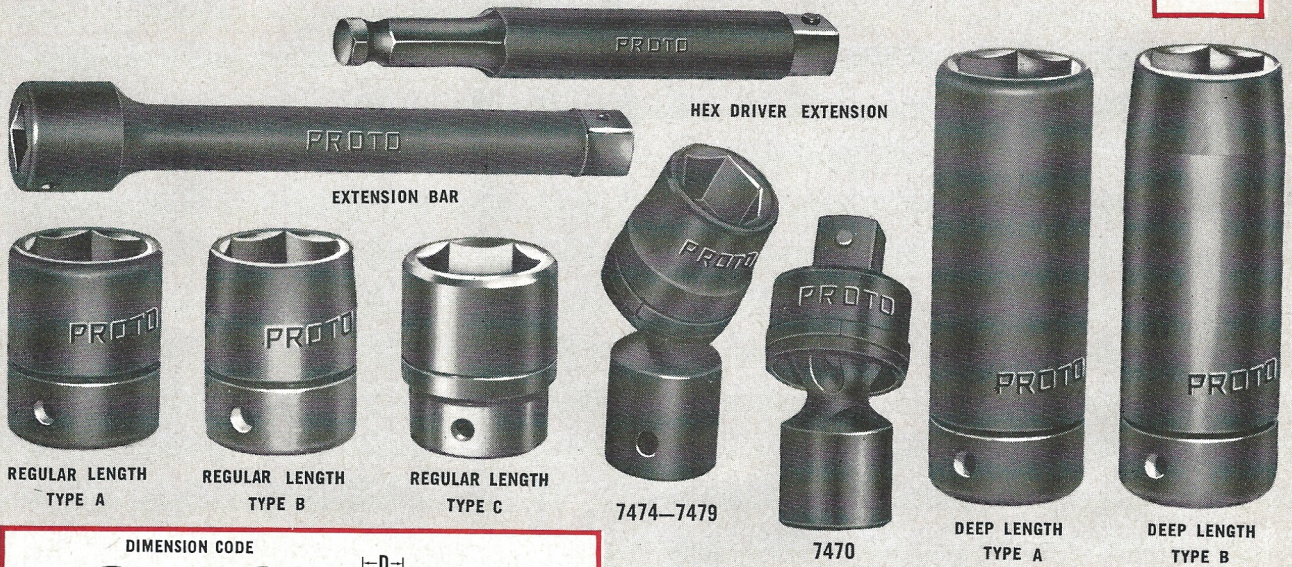
EXTENSION BARS 3/8" Female by 3/8" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7175P	7/16"	3"	.16
7176P	7/16"	6"	.28

NOTE: For spare parts listing see page 75.

1/2" SQUARE DRIVE POWER SOCKETS

1/2"



Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

REGULAR LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM.		OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
			NUT END(B)	DRIVE END(C)				
7412H	B	3/8"	.615"	.885"	.281"	.562"	1 1/2"	.13
7414H	B	7/16"	.697"	.885"	.328"	.562"	1 1/2"	.14
7416H	B	1/2"	.778"	.947"	.375"	.562"	1 1/2"	.17
7418H	B	9/16"	.859"	.947"	.422"	.718"	1 1/2"	.17
7419H	B	1 1/32"	.902"	1.010"	.437"	.750"	1 1/2"	.19
7420H	B	5/8"	.946"	1.010"	.468"	.750"	1 1/2"	.17
7422H	A	1 1/16"	1.042"	1.042"	.515"	.750"	1 1/2"	.22
7424H	A	3/4"	1.135"	1.135"	.562"	.828"	1 1/2"	.26
7426H	A	13/16"	1.197"	1.197"	.609"	.828"	1 1/2"	.38
7428H	C	7/8"	1.291"	1.215"	.625"	.843"	1 1/2"	.31
7430H	C	15/16"	1.385"	1.310"	.687"	.875"	1 3/4"	.45
7432H	C	1"	1.447"	1.310"	.750"	1.000"	1 3/4"	.48
7434H	C	1 1/16"	1.510"	1.373"	.812"	1.250"	2"	.55
7436H	C	1 1/8"	1.635"	1.435"	.843"	1.250"	2"	.66
7438H	C	1 3/16"	1.697"	1.517"	.875"	1.250"	2"	.71
7440H	C	1 1/4"	1.770"	1.558"	.937"	1.250"	2"	.79

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS — HEXAGON (6-POINT)

7416PK	B	½"	.775"	.947"	.281"	.562"	1½"	.16
7418PK	B	⅝"	.855"	.947"	.296"	.781"	1½"	.17

REG. LENGTH SOCKETS — DOUBLE SQUARE (8-PT.)

7412S	B	3/8"	.734"	.885"	.281"	.562"	1 1/2"	.16
7414S	B	7/16"	.828"	.947"	.328"	.562"	1 1/2"	.17
7416S	A	1/2"	.947"	.947"	.375"	.750"	1 1/2"	.21
7418S	A	9/16"	1.010"	1.010"	.422"	.750"	1 1/2"	.26
7420S	A	5/8"	1.135"	1.135"	.468"	.781"	1 1/2"	.29
7422S	A	1 1/16"	1.207"	1.207"	.515"	.812"	1 1/2"	.37
7424S	A	3/4"	1.322"	1.322"	.531"	.843"	1 1/2"	.44
7426S	A	13/16"	1.395"	1.395"	.609"	.843"	1 1/2"	.48
7428S	A	7/8"	1.518"	1.518"	.656"	.906"	1 1/2"	.38
7430S	A	1 5/16"	1.635"	1.635"	.703"	1.031"	1 3/4"	.58
7432S	A	1"	1.707"	1.707"	.750"	1.031"	1 3/4"	.60

NO. 7470 UNIVERSAL JOINT Ball-type. Length, 2 3/4". Wt., .38 Lb.

NOTE: For Power Stud Remover and Setter, See Page 35.

DEEP LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM.		OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
			NUT END(B)	DRIVE END(C)				
7312H	B	3/8"	.619"	.885"	.281"	2.562"	3 1/4"	.33
7314H	B	7/16"	.697"	.885"	.328"	2.562"	3 1/4"	.33
7316H	B	1/2"	.781"	.947"	.375"	2.562"	3 1/4"	.31
7318H	B	9/16"	.859"	.947"	.437"	2.562"	3 1/4"	.37
7320H	B	5/8"	.946"	1.010"	.468"	2.562"	3 1/4"	.36
7322H	A	1 1/16"	1.042"	1.042"	.515"	2.562"	3 1/4"	.41
7324H	A	3/4"	1.135"	1.135"	.562"	2.562"	3 1/4"	.59
7326H	A	13/16"	1.197"	1.197"	.609"	2.562"	3 1/4"	.56
7328H	A	7/8"	1.291"	1.291"	.672"	2.562"	3 1/4"	.62
7330H	A	15/16"	1.385"	1.385"	.703"	2.750"	3 1/2"	.86
7332H	A	1"	1.447"	1.447"	.750"	2.750"	3 1/2"	.90
7334H	A	1 1/16"	1.510"	1.510"	.781"	2.750"	3 1/2"	1.00
7336H	A	1 1/8"	1.572"	1.572"	.843"	2.750"	3 1/2"	1.02

BALL-TYPE UNIVERSAL SOCKETS — HEXAGON (6-PT.)

7474	..	7/16"	.689"	.947"	.343"	.437"	2 1 1/32"	.35
7475	..	1/2"	.800"	.947"	.375"	.500"	2 1 1/32"	.35
7476	..	9/16"	.874"	.947"	.421"	.562"	2 9/16"	.36
7477	..	5/8"	.957"	.947"	.468"	.562"	2 1 1/32"	.37
7478	..	1 1/16"	1.022"	.947"	.515"	.562"	2 5/8"	.37
7479	..	3/4"	1.035"	.947"	.562"	.625"	2 4 1/4"	.36

HEX DRIVER-EXTENSIONS 1/2" Square by 7/16" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7121	2 1/32"	2 3/4"	.17
7123	2 1/32"	5"	.38

1/2" Square by 5/8" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7131	3/4"	2 3/4"	.25
7133	3/4"	5"	.52

EXTENSION BARS 1/2" Female by 1/2" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7180P	2 1/32"	2"	.28
7181P	1 9/32"	5"	.47

NO. 7400D SET 1/2 Square Drive Power Sockets

Six 1/2" square drive power sockets that do 90% of automotive impact work are contained in a durable handle-lock tray.



NO.	SIZE
7416H	1/2"
7418H	9/16"
7420H	5/8"
7422H	1 1/16"
7424H	3/4"
7426H	13/16"
9974	TRAY

Weight 1.70 Lbs.

5/8"

SQUARE DRIVE POWER SOCKETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

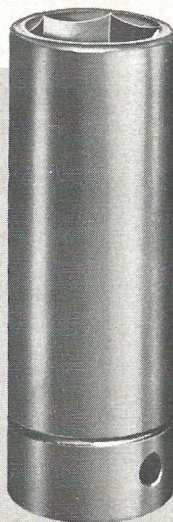
REGULAR
LENGTH
TYPE A



DEEP
LENGTH
TYPE A



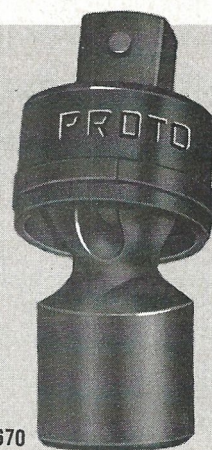
REGULAR LENGTH
TYPE B



DEEP LENGTH
TYPE B



7670



HEX DRIVER
EXTENSION

7657



EXTENSION BAR

7654-7655



7656



NO. 7670
UNIVERSAL JOINT
— BALL TYPE

NO.	LENGTH	WEIGHT
7670	3"	.60 Lb.

Parts for the 7670 Universal Joint are easily replaced. No special tools required.

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

DEEP LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE (A)	OUTSIDE DIAM. NUT END (B)	OUTSIDE DIAM. DRIVE END (C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7518H	B	9/16"	.885"	1.135"	.437"	2.250"	3 1/4"	.56
7520H	B	5/8"	1.010"	1.197"	.468"	2.250"	3 1/4"	.69
7522H	B	11/16"	1.135"	1.260"	.515"	2.250"	3 1/4"	.75
7524H	B	3/4"	1.197"	1.260"	.562"	2.250"	3 1/4"	.76
7526H	A	13/16"	1.260"	1.260"	.609"	2.250"	3 1/4"	.77
7528H	A	7/8"	1.292"	1.292"	.656"	2.375"	3 1/4"	.78
7530H	A	15/16"	1.385"	1.385"	.703"	2.500"	3 1/2"	.94
7532H	A	1"	1.447"	1.447"	.750"	2.625"	3 1/2"	1.06
7534H	A	1 1/16"	1.522"	1.522"	.796"	2.718"	3 1/2"	1.06
7536H	A	1 1/8"	1.572"	1.572"	.843"	2.687"	3 1/2"	1.26
7538H	A	1 3/16"	1.697"	1.697"	.875"	2.656"	3 1/2"	1.36
7540H	A	1 1/4"	1.785"	1.785"	.937"	2.656"	3 1/2"	1.50
7542H	A	1 5/16"	1.885"	1.885"	.937"	2.656"	3 1/2"	1.66
7544H	A	1 3/8"	1.947"	1.947"	1.031"	2.625"	3 1/2"	1.77
7546H	A	1 7/16"	2.010"	2.010"	1.078"	2.625"	3 1/2"	1.80
7548H	A	1 1/2"	2.087"	2.087"	1.125"	2.593"	3 1/2"	1.88

REGULAR LENGTH SOCKET — SQUARE (4-POINT)

7626SS	A	13/16"	1.510"	1.510"	.531"	1.000"	2"	.64
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EXTENSION BAR 5/8" Female by 5/8" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7185P	3/4"	7 1/2"	1.08

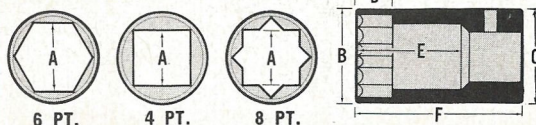
HEX DRIVER EXTENSIONS 5/8" Square by 5/8" Hex. Drive

7151	13/16"	3"	.32
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POWER ADAPTERS

NO.	FEMALE	MALE	LENGTH	WT.
7654	1/2"	5/8"	1 3/4"	.26 Lb.
7655	5/8"	1/2"	1 7/8"	.37 Lb.
7656	5/8"	3/4"	2"	.42 Lb.
7657	3/4"	5/8"	2"	.52 Lb.

DIMENSION CODE



REGULAR LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE (A)	OUTSIDE DIAM. NUT END (B)	OUTSIDE DIAM. DRIVE END (C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7618H	B	9/16"	.870"	1.072"	.437"	.500"	1 3/4"	.18
7619H	B	19/32"	.910"	1.103"	.437"	.500"	1 3/4"	.24
7620H	B	5/8"	.960"	1.135"	.469"	.500"	1 3/4"	.22
7622H	B	11/16"	1.059"	1.197"	.515"	.750"	1 3/4"	.26
7624H	B	3/4"	1.110"	1.260"	.562"	.750"	1 3/4"	.28
7626H	B	13/16"	1.247"	1.291"	.609"	.750"	1 3/4"	.32
7628H	A	7/8"	1.291"	1.291"	.656"	1.032"	1 3/4"	.30
7629H	A	29/32"	1.322"	1.322"	.687"	1.032"	1 3/4"	.41
7630H	A	15/16"	1.385"	1.385"	.703"	1.250"	2"	.50
7632H	A	1"	1.447"	1.447"	.750"	1.250"	2"	.57
7634H	A	1 1/16"	1.522"	1.522"	.796"	1.250"	2"	.64
7636H	A	1 1/8"	1.635"	1.635"	.844"	1.250"	2"	.73
7638H	A	1 3/16"	1.697"	1.697"	.890"	1.250"	2"	.79
7640H	A	1 1/4"	1.785"	1.785"	.937"	1.250"	2"	.89
7642H	A	1 5/16"	1.885"	1.885"	.937"	1.250"	2"	.93
7644H	A	1 3/8"	1.947"	1.947"	1.032"	1.437"	2 1/4"	1.20
7646H	A	1 7/16"	2.010"	2.010"	1.062"	1.437"	2 1/4"	1.20
7648H	A	1 1/2"	2.087"	2.087"	1.125"	1.531"	2 3/8"	1.30

REGULAR LENGTH SOCKETS — DOUBLE SQUARE (8-POINT)

NO.	TYPE	NOM. OPEN. SIZE (A)	OUTSIDE DIAM. NUT END (B)	OUTSIDE DIAM. DRIVE END (C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7618S	B	9/16"	1.072"	1.197"	.375"	.687"	1 1/2"	.31
7620S	B	5/8"	1.197"	1.260"	.406"	.718"	1 1/2"	.31
7622S	A	11/16"	1.260"	1.260"	.437"	.750"	1 1/2"	.40
7624S	A	3/4"	1.385"	1.385"	.468"	.781"	1 1/2"	.44
7626S	A	13/16"	1.510"	1.510"	.531"	.906"	1 5/8"	.50
7628S	A	7/8"	1.510"	1.510"	.593"	.906"	1 5/8"	.53
7630S	A	15/16"	1.635"	1.635"	.656"	1.000"	1 3/4"	.59
7632S	A	1"	1.760"	1.760"	.750"	1.032"	1 3/4"	.75
7634S	A	1 1/16"	1.822"	1.822"	.750"	1.187"	2"	1.00
7636S	A	1 1/8"	1.947"	1.947"	.750"	1.187"	2"	1.06

†Designed Especially for Budd Wheels. ‡Can Be Used for Budd Wheels.

3/4" SQUARE DRIVE **IMPACT** SOCKETS

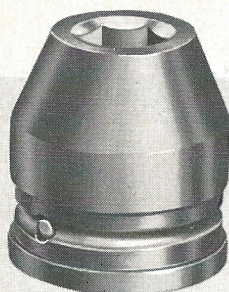
EXTRA HEAVY DUTY WITH
POSITIVE LOCKING PIN

Fedl. Specs.: GGG-W-660. See
"Proto Conversion to Fedl.
Stock Numbers." Bulletin No.
5918.

3/4"



REGULAR LENGTH TYPE A



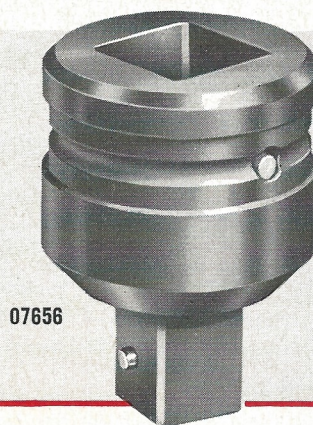
REGULAR LENGTH TYPE B



DEEP LENGTH TYPE A



DEEP LENGTH TYPE B

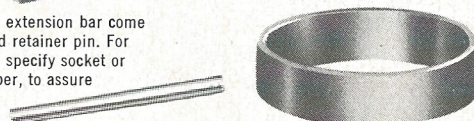


07656



07655

Impact sockets and extension bar come with a flat band and retainer pin. For extra bands or pins specify socket or extension bar number, to assure proper size.



EXTENSION BAR

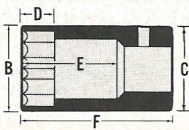
DIMENSION CODE



4 PT.



6 PT.



REGULAR LENGTH SOCKET — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
07509	B	9/16"	1.010"	1.635"	.562"	.750"	1 7/8"	.67
07510	B	5/8"	1.103"	1.635"	.562"	.750"	1 7/8"	.67
07511	B	1 1/16"	1.165"	1.635"	.562"	.750"	1 7/8"	.66
07512	B	3/4"	1.260"	1.635"	.625"	1.000"	1 7/8"	.68
07513	B	13/16"	1.385"	1.635"	.625"	1.000"	1 7/8"	.62
07514	B	7/8"	1.510"	1.635"	.687"	1.000"	2"	.70
07515	B	15/16"	1.572"	1.635"	.687"	1.000"	2"	.86
07516	B	1"	1.635"	1.760"	.687"	1.062"	2 1/16"	1.00
07517	B	1 1/16"	1.697"	1.760"	.750"	1.062"	2 1/16"	1.14
07518	A	1 1/8"	1.760"	1.760"	.750"	1.125"	2 3/16"	1.28
07519	A	1 3/16"	1.885"	1.885"	.750"	1.125"	2 3/16"	1.32
07520	A	1 1/4"	2.010"	2.010"	.750"	1.125"	2 3/16"	1.36
07521	A	1 5/16"	2.072"	2.072"	.750"	1.125"	2 3/16"	1.32
07522	A	1 3/8"	2.135"	2.135"	.812"	1.125"	2 1/4"	1.62
07523	A	1 7/16"	2.260"	2.260"	.812"	1.156"	2 5/16"	1.56
†07524	A	1 1/2"	2.322"	2.322"	.875"	1.156"	2 5/16"	1.62

REGULAR LENGTH SOCKET — SQUARE (4-POINT)

†07513SS	A	1 3/16"	1.697"	1.697"	.537"	1.437"	2 7/16"	.82
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DEEP LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
07509L	B	9/16"	1.010"	1.635"	.562"	1.625"	3"	1.19
07510L	B	5/8"	1.103"	1.635"	.562"	1.625"	3"	1.20
07511L	B	1 1/16"	1.166"	1.635"	.562"	1.625"	3"	1.21
07512L	B	3/4"	1.260"	1.635"	.625"	1.625"	3"	1.22
07513L	B	13/16"	1.385"	1.635"	.625"	1.625"	3"	1.23
07514L	B	7/8"	1.510"	1.635"	.687"	1.625"	3"	1.24
07515L	B	15/16"	1.572"	1.635"	.687"	1.625"	3"	1.25
07516L	B	1"	1.635"	1.760"	.687"	2.000"	3"	1.26
07517L	B	1 1/16"	1.697"	1.760"	.750"	2.000"	3"	1.32
07518L	A	1 1/8"	1.760"	1.760"	.750"	2.000"	3"	1.41
07519L	A	1 3/16"	1.885"	1.885"	.750"	2.187"	3 1/4"	1.60
07520L	A	1 1/4"	2.010"	2.010"	.750"	2.187"	3 1/4"	1.81
07521L	A	1 5/16"	2.072"	2.072"	.750"	2.187"	3 1/4"	1.85
07523L	A	1 7/16"	2.260"	2.260"	.812"	2.375"	3 1/2"	2.5
†07524L	A	1 1/2"	2.322"	2.322"	.875"	2.375"	3 1/2"	2.6

†7748H	A	1 1/2"	2.135"	2.135"	1.125"	2.500"	3 1/2"	1.92
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DEEP LENGTH SOCKET — SQUARE (4-POINT)

†07513SL	A	1 3/16"	1.697"	1.697"	.537"	3.000"	4"	1.98
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EXTENSION BAR 3/4" Female by 3/4" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
07567	1"	7"	1.92

IMPACT POWER ADAPTERS

No. 07655 3/4" Female x 1" male, length 2 1/4". Weight, .72 Lb.

No. 07656 1" Female x 3/4" male, length 2 3/4". Weight, 1.30 Lbs.

†Designed for Budd Wheels. †Suitable for Budd Wheels.

BUDD WHEEL POWER-IMPACT SOCKETS

Specially designed PROTO sockets with 13/16" and 15/16" square and 1 1/2" and 1 3/4" hex openings speed the job of changing Budd wheels. They are available in 5/8" square drive power, 3/4" power, 3/4" impact and 1" impact types. Socket 07513SL has a stop in the square opening base at the correct depth to prevent damage to inner nut threads. This socket, and 7748HL, 07524L and 10024L, are extra deep to clear most hubs without using extensions.

NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

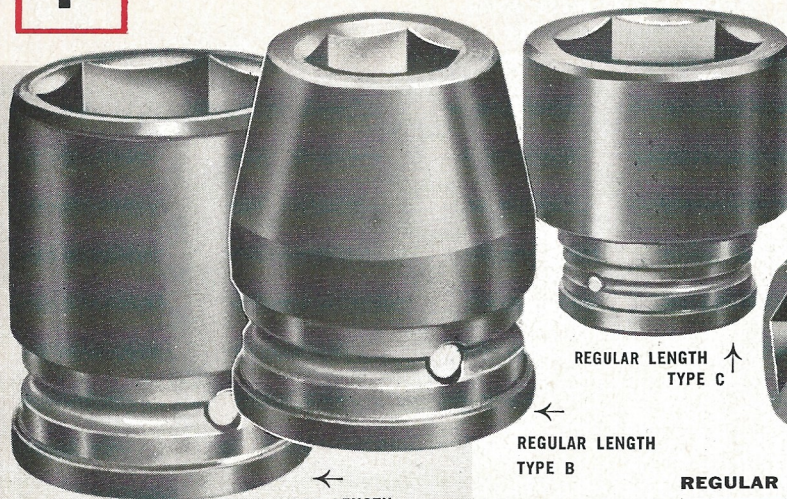
NOTE: For spare parts listing see page 75.

NO.	TYPE	NOMINAL OPENING	DRIVE SIZE	TYPE SOCKET	TOTAL LENGTH	WT., LBS.
7626SS	A	13/16" Sq.	5/8"	Power	2"	.64
07513SL	A	13/16" Sq.	3/4"	Impact	4"	1.98
07513SS	A	13/16" Sq.	3/4"	Impact	2 7/16"	.82
10013SS	B	13/16" Sq.	1"	Impact	2 5/16"	1.16
10015SL	A	15/16" Sq.	1"	Impact	2 1/4"	1.60
10028XL	C*	1 3/4" Hex.	1"	Impact	3 5/8"	2.94
7748HL	A	1 1/2" Hex.	3/4"	Power	5"	3.5
07524L	A	1 1/2" Hex.	3/4"	Impact	3 1/2"	2.6
10024L	A	1 1/2" Hex.	1"	Impact	3 1/2"	2.4

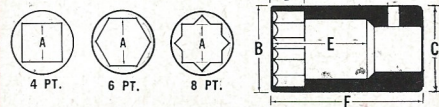
* For illustration of type C refer to page 56.

1"

SQUARE DRIVE **IMPACT** SOCKETS

PROTO TOOLS
 PROFESSIONAL QUALITY TOOLS


DIMENSION CODE

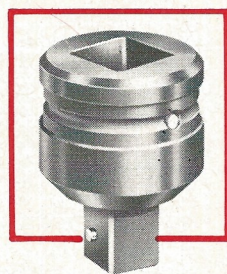


Impact sockets and extension bar come with a flat band and retainer pin. For extra bands or pins specify socket or extension bar number, to assure proper size.



DEEP LENGTH
TYPE A

↑ DEEP LENGTH
TYPE B



IMPACT ADAPTERS

No. 07655 3/4" female x 1"
—male 2 1/4" length. Wt. .72 Lbs.
No. 07656 1" female x 3/4"
—male 2 3/4" length. Wt. 1.30 Lbs.

DEEP
LENGTH
TYPE C

REGULAR LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE (A)	OUTSIDE DIAM. NUT END (B)	OUTSIDE DIAM. DRIVE END (C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
10012	B	3/4"	1.437"	2.135"	.593"	1.000"	2 5/16"	.96
10014	B	7/8"	1.531"	2.135"	.656"	1.000"	2 5/16"	1.04
10015	B	1 1/16"	1.593"	2.135"	.750"	1.125"	2 5/16"	1.02
10016	B	1"	1.687"	2.135"	.750"	1.250"	2 3/8"	1.06
10017	B	1 1/16"	1.760"	2.135"	.875"	1.250"	2 3/8"	1.28
†10018	B	1 1/8"	1.820"	2.135"	.875"	1.250"	2 3/8"	1.30
10019	B	1 3/16"	1.885"	2.135"	.875"	1.250"	2 3/8"	1.28
10020	B	1 1/4"	2.000"	2.135"	.937"	1.375"	2 1/2"	1.23
10021	B	1 5/16"	2.063"	2.135"	1.000"	1.500"	2 9/16"	1.30
10022	A	1 3/8"	2.135"	2.135"	1.031"	1.531"	2 5/8"	1.46
10023	A	1 7/16"	2.260"	2.260"	1.062"	1.531"	2 11/16"	1.46
†10024	C	1 1/2"	2.322"	2.260"	1.125"	1.531"	2 3/4"	1.46
10025	C	1 9/16"	2.375"	2.250"	1.125"	1.562"	2 13/16"	1.56
10026	C	1 5/8"	2.447"	2.260"	1.125"	1.562"	2 7/8"	1.78
10027	C	1 11/16"	2.572"	2.260"	1.125"	1.812"	2 15/16"	1.96
10028	C	1 3/4"	2.635"	2.260"	1.250"	1.750"	3"	2.0
10029	C	1 13/16"	2.760"	2.260"	1.312"	1.812"	3 1/16"	2.5
10030	C	1 7/8"	2.760"	2.260"	1.312"	1.875"	3 1/8"	2.3
10031	C	1 15/16"	2.895"	2.260"	1.312"	1.875"	3 3/16"	2.7
10032	C	2"	3.020"	2.260"	1.437"	1.875"	3 1/4"	3.2
10033	C	2 1/16"	3.020"	2.260"	1.437"	1.875"	3 5/16"	3.2
10034	C	2 1/8"	3.145"	2.390"	1.500"	1.875"	3 3/8"	3.4
10035	C	2 3/16"	3.270"	2.390"	1.562"	1.921"	3 7/16"	4.0
10036	C	2 1/4"	3.270"	2.390"	1.562"	2.000"	3 1/2"	4.1
10037	C	2 5/16"	3.395"	2.390"	1.562"	2.000"	3 9/16"	4.2
10038	C	2 3/8"	3.520"	2.390"	1.562"	2.000"	3 5/8"	4.2
10039	C	2 7/16"	3.510"	2.390"	1.562"	2.000"	3 5/8"	4.5
10040	C	2 1/2"	3.635"	2.390"	1.562"	2.375"	4"	4.9
10041	C	2 9/16"	3.760"	2.390"	1.562"	2.375"	4"	5.4
10042	C	2 5/8"	3.760"	2.390"	1.562"	2.375"	4"	5.3
10043	C	2 11/16"	3.885"	2.390"	1.562"	2.625"	4 1/4"	6.0
10044	C	2 3/4"	3.885"	2.390"	1.562"	2.625"	4 1/4"	5.8
10045	C	2 13/16"	4.010"	2.390"	1.625"	2.625"	4 3/8"	6.9
10046	C	2 7/8"	4.010"	2.390"	1.625"	2.625"	4 3/8"	6.5
10047	C	2 15/16"	4.135"	2.390"	1.687"	2.625"	4 5/8"	7.7
10048	C	3"	4.260"	2.390"	1.750"	2.625"	4 5/8"	7.9
10050	C	3 1/8"	4.385"	2.390"	1.750"	2.625"	4 3/4"	8.3

REGULAR AND LONG SOCKETS — SQUARE (4-POINT)

†10013SS	B	1 3/16"	1.947"	2.135"	.609"	.875"	2 5/16"	1.16
†10015SL	B	1 5/16"	2.063"	2.125"	.593"	1.125"	2 1/4"	1.60

REGULAR LENGTH SOCKETS — DOUBLE SQUARE (8-POINT)

10018S	A	1 1/8"	2.260"	2.260"	.937"	1.250"	2 1/2"	1.56
10020S	A	1 1/4"	2.385"	2.385"	.937"	1.312"	2 9/16"	1.80
10021S	A	1 5/16"	2.510"	2.510"	1.000"	1.531"	2 5/8"	2.2
10023S	A	1 7/16"	2.697"	2.697"	1.062"	1.625"	2 3/4"	2.3

DEEP LENGTH SOCKETS — HEXAGON (6-POINT)

10015L	B	1 5/16"	1.593"	2.135"	.750"	2.000"	3 1/2"	2.1
10017L	B	1 1/16"	1.760"	2.135"	.875"	2.250"	3 1/2"	2.3
10020L	B	1 1/4"	2.000"	2.135"	.937"	2.250"	3 1/2"	2.2
†10024L	C	1 1/2"	2.322"	2.260"	1.125"	2.250"	3 1/2"	2.4
†10028XL	C	1 3/4"	2.625"	2.250"	1.250"	2.500"	3 5/8"	2.94

†Designed for Budd Wheels. ‡Suitable for Budd Wheels.

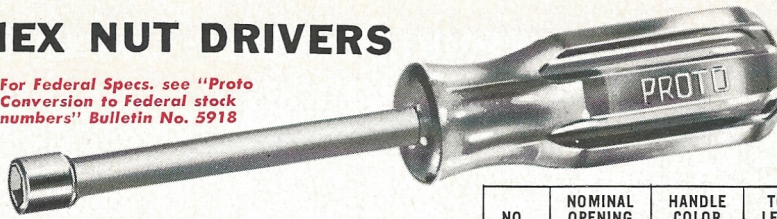
EXTENSION BAR 1" FEMALE by 1" MALE

NO.	SHANK DIAM.	LENGTH	WT., LBS.
10607	1 11/32"	7 1/2"	3.7

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

HEX NUT DRIVERS

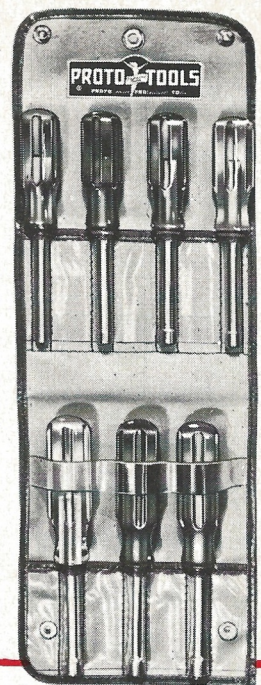
For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918



SET NO. 9200C

A must for electronics, instruments, automotive, radio and ignition work. Fluted handles of fire-resistant plastic are size coded by colors. Chrome plated hollow steel shafts clear long bolts, reduce weight. Special *heat-treated* shafts give high wear resistance for use on hardened screws or bolts... long life. *Precision formed drive openings* fit snugly... hold tight for long usage.

NO.	NOMINAL OPENING	HANDLE COLOR	TOTAL LENGTH	WT., LBS.
9206	3/16"	Black	6 1/8"	.16
9207	7/32"	Brown	6 1/8"	.16
9208	1/4"	Red	6 1/8"	.16
9209	9/32"	Orange	6 1/8"	.16
9210	5/16"	Amber	6 7/8"	.22
9211	11/32"	Green	6 7/8"	.22
9212	3/8"	Blue	6 7/8"	.22
9214	7/16"	Brown	7 3/16"	.30
9216	1/2"	Red	7 3/16"	.30
9218	9/16"	Orange	7 3/16"	.33
9220	5/8"	Amber	7 3/16"	.33

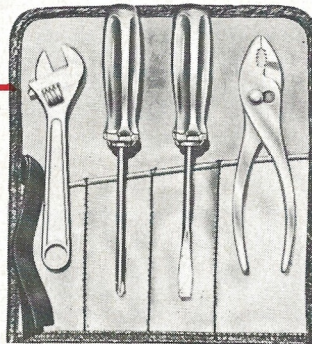


NO. 9200C SET

Includes 7 drivers—Nos. 9206 to 9212, in heavy-duty kit 2419. Wt. 1.44 Lbs.

NO. 9900D CAR OR HOUSEHOLD GIFT SET

Four useful tools in handy roll-up kit for glove compartment or kitchen drawer.



CONTENTS OF SET

NO.	DESCRIPTION
276	6 1/2" Slip Jt. Plier
706	6" Adj. Wrench
9604	Screwdriver, Plastic Hdl., 1/4" Bit
9684	Screwdriver, Phillips No. 2 Bit
2408	Kit 7 1 1/16" x 9 1/4"

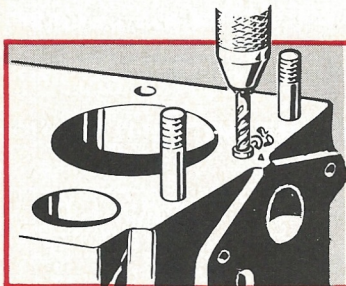
Weight of Set, 1.24 lbs.

SCREW AND PIPE EXTRACTORS

GGG-E-936, Type I, Class 2

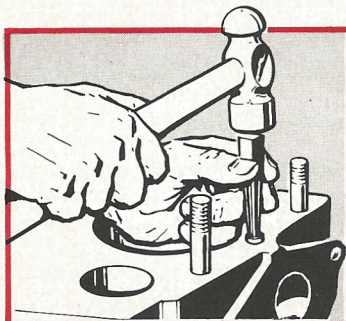


These extractors are the fastest type obtainable for removing broken screws, studs, bolts, pipe, fittings, etc. They are vastly superior to other designs for several reasons: (1) Only three quick steps are required. (2) Even if hole is drilled clear through, extractor will not chew up object as do other types. (3) Sharp edges bite positively. (4) Gradual taper of flutes prevents wedging and binding. (5) Objects with right or left threads may be removed. (6) Special alloy steel provides long life.



HOW TO USE

1. Drill Hole.
2. Drive in Extractor and Turn Out Broken Object.



NO.	SIZE OF SMALL END	SIZE OF SHANK	OVER-ALL LENGTH	U.S.S. SCREW, STUD OR BOLT SIZE	DRILL SIZE	MINIMUM DEPTH OF HOLE	PIPE SIZE	WT., LBS.
9521	1/8"	3/16"	2 5/8"	1/4, 5/16	7/8"	3/8"	...	.01
9522	11/64"	3/16"	2 5/8"	3/8	3/16"	1/2"	...	.02
†9523	13/64"	1/4"	2 7/8"	7/16"	15/64"	1/2"	1/8"	.04
9524	19/64"	5/16"	3"	1/2, 9/16"	9/16"	1/2"	1/4"	.06
9525	11/32"	3/8"	3 1/4"	5/8	5/8"	5/8"	3/8"	.10
9525B	27/64"	7/16"	3 7/8"	3/4	15/32"	1 1/16"	...	.17
9526	1/2"	1/2"	4 1/2"	7/8	9/16"	1 1/16"	1/2"	.23
9527	19/32"	5/8"	4 7/8"	1, 1 1/8	21/32"	3/4"	1/2"	.40
9528	23/32"	3/4"	5 3/8"	1 1/4, 1 3/8	13/16"	3/4"	3/4"	.65
9529	31/32"	1"	5 1/2"	1 1/2	1 1/16"	3/4"	1"	1.12

†For Broken Alemite Fittings.

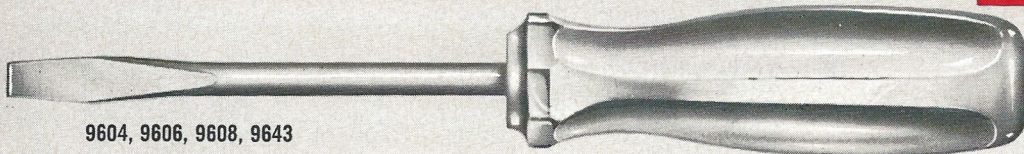
NO. 9500 A SCREW EXTRACTOR SET

Includes the five most popular sizes of extractors—Nos. 9521, 9522, 9523, 9524 and 9525—and a handy, vinyl plastic kit for making all of the extractors quickly accessible. Wt., .26 Lb.



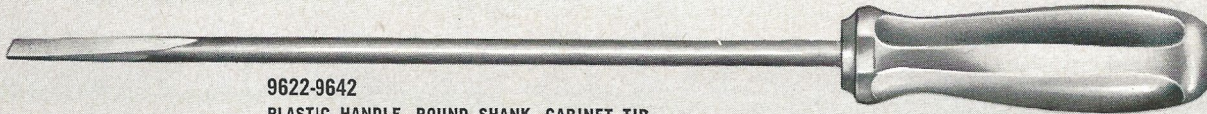
SCREWDRIVERS

Fedl. Spec.: *GGG-S-121c *GGG-S-121d. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.



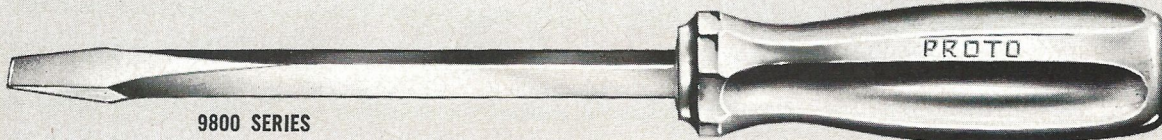
9604, 9606, 9608, 9643

PLASTIC HANDLE, ROUND SHANK, STANDARD TIP



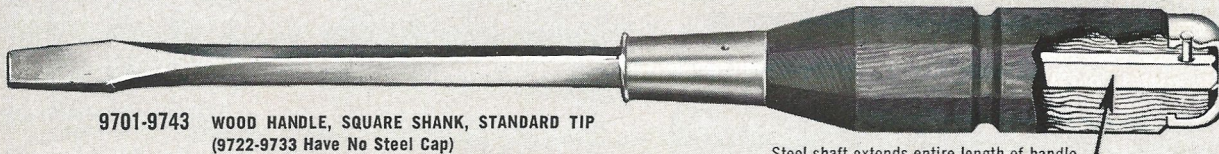
9622-9642

PLASTIC HANDLE, ROUND SHANK, CABINET TIP



9800 SERIES

PLASTIC HANDLE, SQUARE SHANK, STANDARD TIP



9701-9743 WOOD HANDLE, SQUARE SHANK, STANDARD TIP
(9722-9733 Have No Steel Cap)

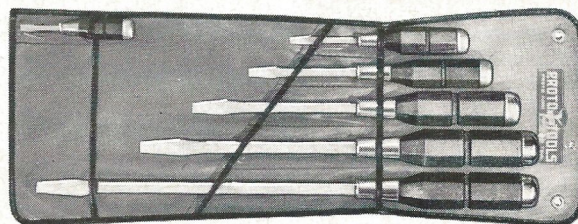
Steel shaft extends entire length of handle.



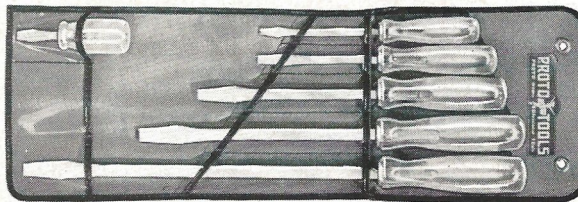
9752

WOOD HANDLE, SQUARE SHANK, STANDARD TIP

- Fine alloy steel blades are heat treated entire length.
- Big comfortable handles give you extra gripping power, less hand slipping, less fatigue.
- Plastic handles are hand-fitted, big diameter, with large end bearing surface for great palm pressure.
- Deep flutes prevent screwdriver rolling.
- Plastic is tough, smooth, good insulator,
- Long-time favorite sure-grip, octagon shape wood handles are seasoned hardwood.



SET 9700A Standard Screwdriver Set—Wood Handle, Square Shank
Contents: 9701, 9702, 9704, 9706, 9708, 9712, Kit 2424. Wt. 3.04 lbs.



SET 9800A Standard Screwdriver Set—Plastic Handle, Square Shank
Contents: 9832, 9804, 9806, 9808, 9812, 9652, Kit 2425. Wt. 2.27 lbs.

PLASTIC-HANDLE SCREWDRIVERS

ROUND SHANK—STANDARD TIP

NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
*9604	1/4"	4"	5/16"	8"	.17
*9606	5/16"	6"	3/8"	10 3/8"	.30
9643	5/16"	10"	3/8"	14 3/8"	.39
*9608	3/8"	8"	7/16"	13"	.47

ROUND SHANK—CABINET TIP

9622	1/8"	2 1/2"	1/8"	5 1/4"	.04
*9623	1/8"	3"	1/8"	5 3/4"	.05
9624	1/8"	4"	1/8"	6 3/4"	.06
*9625	1/8"	5"	1/8"	7 3/4"	.05
9626	1/8"	6"	1/8"	8 3/4"	.06
*9627	1/8"	8"	1/8"	10 3/4"	.06
*9631	3/16"	3"	3/16"	6 3/8"	.10
*9632	3/16"	4"	3/16"	7 3/8"	.10
*9633	3/16"	5"	3/16"	8 3/8"	.13
*9634	3/16"	6"	3/16"	9 3/8"	.14
*9635	3/16"	8"	3/16"	11 3/8"	.13
*9636	1/4"	10"	1/4"	14"	.24
9642	1/4"	12"	1/4"	16"	.26

SQUARE SHANK—STANDARD TIP

9822	1/8"	2 1/2"	1/8"	5 1/4"	.04
9801	3/16"	1 1/2"	1/4"	4 1/4"	.06
9832	3/16"	4"	1/4"	7 3/8"	.11
9833	3/16"	7 1/2"	1/4"	10 7/8"	.15
9803	1/4"	3"	1/4"	6 3/8"	.13
*9804	1/4"	4"	5/16"	8"	.19
9842	1/4"	9"	5/16"	13"	.28
9805	5/16"	5"	3/8"	9 3/8"	.31
*9806	5/16"	6"	3/8"	10 3/8"	.36
9843	5/16"	10"	3/8"	14 3/8"	.45
*9808	3/8"	8"	7/16"	13"	.55
*9810	3/8"	10"	7/16"	15"	.62
*9812	3/8"	12"	7/16"	17"	.69

WOOD-HANDLE SCREWDRIVERS

SQUARE SHANK—STANDARD TIP

NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
*9701	3/16"	1 1/2"	1/4"	4 5/16"	.09
*9702	3/16"	2 1/2"	1/4"	6 21/32"	.15
*9704	1/4"	4 1/16"	5/16"	9 3/32"	.29
*9706	5/16"	6"	3/8"	12 3/16"	.51
*9708	3/8"	8"	7/16"	14 13/16"	.78
*9710	3/8"	10"	7/16"	16 13/16"	.87
*9712	3/8"	12"	7/16"	18 13/16"	.97
*9714	7/16"	13 7/8"	1/2"	22 11/16"	1.55

LONG TYPE—SQUARE SHANK—STANDARD TIP

9722	1/8"	2 1/2"	1/8"	5 3/4"	.06
9724	1/8"	4 1/2"	1/8"	7 3/4"	.07
9732	3/16"	4"	1/4"	8 7/8"	.16
9733	3/16"	7 1/2"	1/4"	12 3/8"	.19
*9741	3/16"	9"	1/4"	13 5/32"	.21
*9742	1/4"	9 17/32"	5/16"	14 19/32"	.38
*9744	1/4"	24"	5/16"	29 1/16"	.64
*9743	5/16"	10"	3/8"	16 3/16"	.62

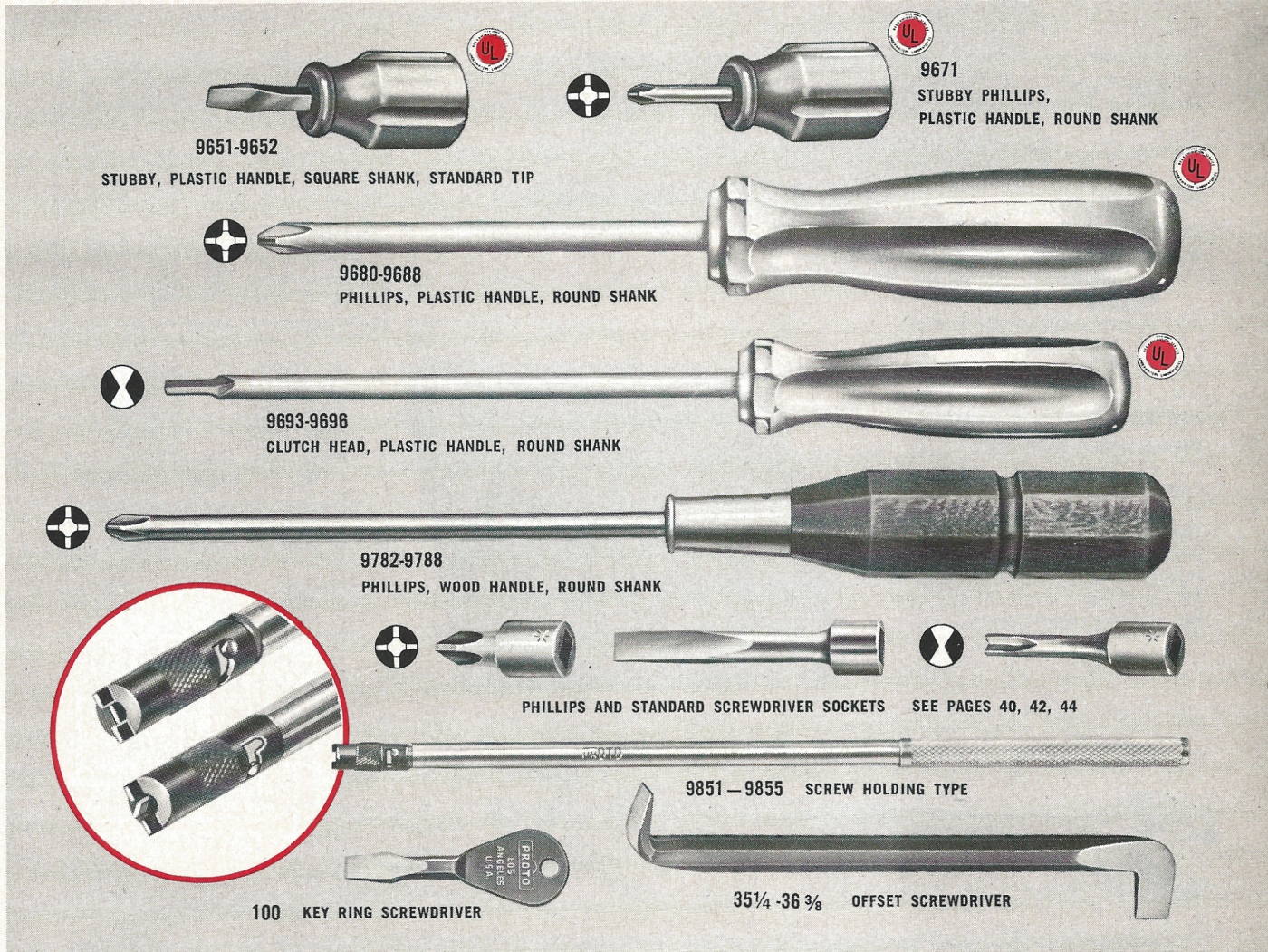
SHORT TYPE—SQUARE SHANK—STANDARD TIP

Fine for tappet work.

*9752	5/16"	1 11/16"	11/32"	6"	.30
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● Has steel cap riveted to handle and blade.

SPECIAL SCREWDRIVERS



Fed. Specs.: *GGG-S-121c *GGG-S-121d. See "Proto Conversion to Fed. Stock Numbers." Bulletin No. 5918.

STUBBY PLASTIC-HANDLE SCREWDRIVERS

NO.	SHANK SIZE AND SHAPE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
*9651	3/16" Square	1"	7/32"	2 7/8"	.07
*9652	1/4" Square	1 1/2"	9/32"	3 7/8"	.12

PHILLIPS PLASTIC-HANDLE SCREWDRIVERS

NO.	PHILLIPS TIP NO.	SHANK DIAM.	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
9680	0	1/8"	2 1/2"	5 1/4"	.06
*9682	1	3/16"	3"	6 3/8"	.09
*9684	2	1/4"	4 1/4"	8 1/4"	.17
*9686	3	5/16"	6"	10 3/8"	.30
*9688	4	3/8"	8"	13"	.48
*9671	2	1/4"	9/16"	2 7/16"	.07

• Stubby Type—For Restricted Clearance Work.

CLUTCH HEAD (FIG. 8 OR BUTTERFLY) SCREWDRIVERS

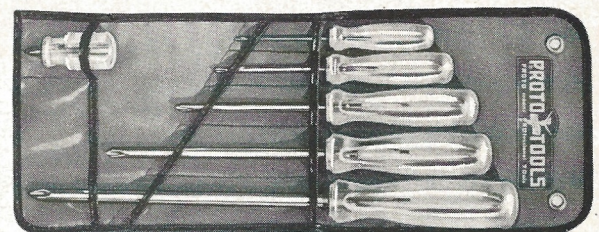
Bits are Type G design, preferred in service work.

NO.	TIP SIZE	NOS. OF SCREWS ACCOMMODATED				BLADE LGTH.	OVER. LGTH.	WT., LBS.
		ALL HDS.	FLAT, OVAL	PAN	FILL.			
9693	5/32"	8	6†	6, 10	10	4"	7 3/8"	.19
9694	3/16"	..	10†	12	12	4"	7 3/8"	.20
9695	1/4"	14, 1/4"	12	..	..	5"	9"	.32
9696	5/16"	5/16"	5/16"§	3/8"	3/8"	5"	9 3/8"	.40

†Also #10 Hexagon. ‡Also #10 Truss & #12 Binding. §Also 3/8" Truss, Hex & Binding.

PHILLIPS WOOD-HANDLE SCREWDRIVERS

NO.	PHILLIPS TIP NO.	SHANK DIAM.	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
*9782	1	3/16"	3"	6 1/4"	.07
*9784	2	1/4"	4"	8 7/8"	.18
*9786	3	5/16"	6"	11 7/8"	.34
*9788	4	3/8"	8"	14 1/2"	.52



SET 9600A Phillips Screwdriver Set—Plastic Handle, Round Shank
Contents: 9671, 9680, 9682, 9684, 9686, 9688, Kit 2426. Wt. 1.40 lbs.

SCREW-HOLDING SCREWDRIVERS. Three sizes fit all needs. Engineered to hold screw with 5 to 9 inch-pounds pressure for starting into material, with easy twist of fingers.

NO.	LENGTH	WT., LBS.
9851	2 1/2"	.05
9853	5"	.1
9855	9"	.1

OFFSET SCREWDRIVERS. For work in close places, drag link and brake adjustments. Bits are at right angles to each other.

NO.	BIT WIDTH	LENGTH	WT., LBS.
35 1/4	1/4"	3"	.05
*36 1/4	1/4"	4 5/8"	.07
*36 5/16	5/16"	5"	.11
*36 3/8	3/8"	6 1/8"	.19

KEY RING SCREWDRIVER

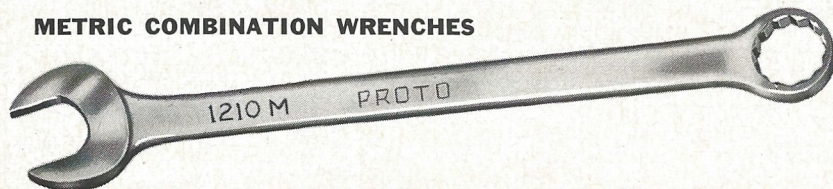
The perfect gift. Has hundreds of uses.

NO.	BIT WIDTH	LENGTH	WT., LBS.
100	3/16"	2 1/4"	.015

METRIC WRENCHES AND SETS

Metric size sockets combination and open end wrenches for foreign cars, machinery and equipment are made on standard PROTO dies from fully guaranteed PROTOLOY® steels. Critical openings are exactly broached to meet all requirements of the professional mechanic.

METRIC COMBINATION WRENCHES



METRIC COMBINATION WRENCHES AND SET

Seven most used sizes—11mm, 12mm, 13mm, 14mm, 16mm, 17mm, and 19mm. Comes in bright red and blue plastic kit. Each Proto Metric Wrench is properly broached and drop-forged to assure the right combination of strength and toughness at the most critical places.



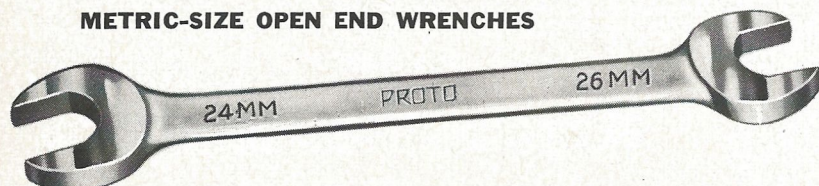
NO.	OPENING SIZES, MM.	LENGTH, INCHES	WT., LBS.
1210M	10	4 7/8	.06
1211M	11	5 1/4	.10
1212M	12	5 5/8	.10
1213M	13	6	.14
1214M	14	6 3/4	.20
1215M	15	7 1/2	.20
1216M	16	7 1/2	.27
1217M	17	8 1/4	.34
1218M	18	8 3/4	.34
1219M	19	9 1/4	.45
1220M	20	10 1/4	.55
1222M	22	11 1/4	.65

CONTENTS SET NO. 1200 M

NO.	SIZE OF OPENINGS	LENGTH
1211M	11mm	5 1/4"
1212M	12mm	5 5/8"
1213M	13mm	6"
1214M	14mm	6 3/4"
1216M	16mm	7 1/2"
1217M	17mm	8 1/4"
1219M	19mm	9 1/4"
2404M	Vinyl Kit	

Weight, 1.80 Lbs.

METRIC-SIZE OPEN END WRENCHES



Forged from fine alloy steel and properly heat treated for extra strength and toughness. Openings are accurately machined. The ten wrenches provide all openings from 6 through 24 millimeters by 1-millimeter steps, plus a 26-millimeter opening.

NO.	NOMINAL OPENING SIZES, MM.	HEAD THICKNESS, INCHES	LENGTH, INCHES	WT., LBS.
30607	6 x 7	.172	4 1/2	.04
30809	8 x 9	.203	4 7/8	.06
31011	10 x 11	.219	5 1/4	.07
31213	12 x 13	.250	5 5/8	.12
31415	14 x 15	.296	6 3/4	.23
31617	16 x 17	.328	8 1/8	.22
31819	18 x 19	.344	8 9/16	.38
32022	20 x 22	.370	10	.60
32123	21 x 23	.370	10 1/2	.56
32426	24 x 26	.437	11 1/8	.78

METRIC-SIZE OPEN END WRENCH SETS

CONTENTS SET NO. 30000A

NO.	OPENING SIZES MM.	LENGTH, INCHES
30607	6 x 7	4 1/2
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 9/16
32022	20 x 22	10
32123	21 x 23	10 1/2
32426	24 x 26	11 1/8
2414 Vinyl Kit		

Weight, 3.4 Lbs.



CONTENTS SET NO. 30000R

NO.	OPENING SIZES, MM.	LENGTH, INCHES
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 9/16
2407 Vinyl Kit		

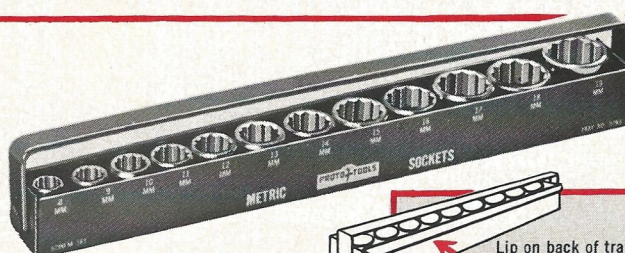
Weight, 1.20 Lbs.

METRIC SOCKET SET

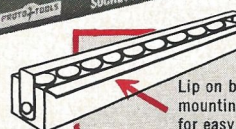
SET NO. 5200M (12 Sockets & Tray)

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing see opposite page.

Twelve sizes 3/8" sq. drive, 12 point, Metric sockets in red-lacquered tray—keeps sockets separate from look-alike Standard sockets in mechanic's tool chest. All sockets hot-punched in special analysis alloy steel, quality chrome plate. Size and numbers stenciled on tray. Spillproof locking band.



SET NO.
5200 M



Lip on back of tray permits mounting on edge of chest for easy access in use.

METRIC SOCKETS, WHITWORTH WRENCHES AND SOCKETS

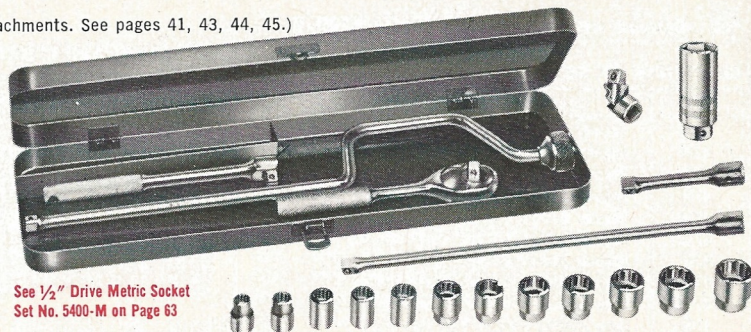
(All socket drive ends fit regular U.S. Standard ratchets and attachments. See pages 41, 43, 44, 45.)

METRIC SOCKET SET NO. 5200ABM

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing below.

Set also includes the following:

5026HP	Spark Plug Socket, 12 pt., 1 3/16" opening
5249	Ratchet, 7"
5260	Extension, 3 1/2"
5262	Extension, 12"
5265	Hinge Handle, 7 3/8"
5270	Universal Joint
5280	Speed Handle, 16 7/8"
5295	Steel Bx, 18 1/2" x 5 1/4" x 1 1/2"



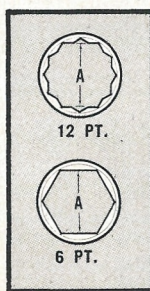
See 1/2" Drive Metric Socket Set No. 5400-M on Page 63



4704M-4712M

5208M-5219M

5412M-5432M



1/4" SQUARE DRIVE SOCKETS 6-PT.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
4704M	4	7/8	.01
4705M	5	7/8	.02
4706M	6	7/8	.02
4707M	7	7/8	.02
4708M	8	7/8	.02
4709M	9	7/8	.03
4710M	10	7/8	.03
4711M	11	7/8	.04
4712M	12	7/8	.05

METRIC SOCKET WRENCHES

IN 1/4", 3/8" AND 1/2"

SQUARE DRIVE SIZES

★ 3/8" SQUARE DRIVE SOCKETS 12-PT.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5208M	8	1	.04
5209M	9	1	.04
5210M	10	1	.05
5211M	11	1	.05
5212M	12	1	.06
5213M	13	1	.06
5214M	14	1	.06
5215M	15	1	.08
5216M	16	1	.07
5217M	17	1 1/16	.08
5218M	18	1 1/16	.10
5219M	19	1 3/16	.13

1/2" SQUARE DRIVE SOCKETS 12-PT.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5412M	12	1 13/32	.10
5413M	13	1 13/32	.11
5414M	14	1 13/32	.10
5415M	15	1 13/32	.11
5416M	16	1 13/32	.16
5417M	17	1 13/32	.13
5418M	18	1 13/32	.17
5419M	19	1 13/32	.16
5420M	20	1 13/32	.18
5421M	21	1 13/32	.21
5422M	22	1 17/32	.28
5423M	23	1 17/32	.32
5424M	24	1 17/32	.37
5425M	25	1 17/32	.30
5426M	26	1 17/32	.32
5427M	27	1 17/32	.31
5428M	28	1 25/32	.49
5429M	29	1 25/32	.46
5430M	30	1 25/32	.47
5432M	32	1 25/32	.49

WHITWORTH WRENCHES



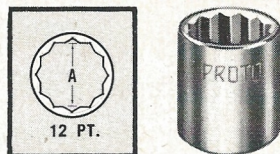
Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.

COMBINATION WRENCHES

NO.	WHITWORTH SIZE BOLT		WRENCH OP. SIZE	TOTAL LENGTH	WT. LBS.
	BEFORE 1951	AFTER 1951			
1206W	3/16	1/4	.456"	5 1/4"	.13
1208W	1/4	5/16	.532"	6"	.18
1210W	5/16	3/8	.608"	7 1/2"	.25
1212W	3/8	7/16	.719"	8 1/4"	.32

WHITWORTH SOCKETS*

Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.



3/8" DRIVE SOCKETS 12-PT.

NO.	WHITWORTH SIZE BOLT		SOCKET SIZE	TOTAL LENGTH	WT., LBS.
	BEFORE 1951	AFTER 1951			
5206W	3/16	1/4	.456"	1"	.04
5208W	1/4	5/16	.532"	1"	.06
5210W	5/16	3/8	.608"	1"	.07
5212W	3/8	7/16	.719"	1 1/8"	.11

METRIC CONVERSION TABLE

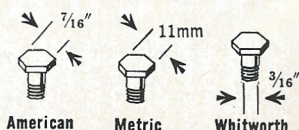
INCHES		M M
FRACTIONS	DECIMALS	
—	.0004	.01
—	.004	.10
—	.01	.25
1/64	.0156	.397
—	.0197	.50
—	.0295	.75
1/32	.03125	.794
—	.0394	1.
3/64	.0469	1.191
—	.059	1.5
1/16	.062	1.588
5/64	.0781	1.984
—	.0787	2.
3/32	.094	2.381
—	.0984	2.5
7/64	.109	2.778
—	.1181	3.
1/8	.125	3.175
—	.1378	3.5
9/64	.141	3.572
5/32	.156	3.969
—	.1575	4.
11/64	.172	4.366
—	.177	4.5
3/16	.1875	4.763
—	.1969	5.
13/64	.203	5.159
—	.2165	5.5
7/32	.219	5.556
15/64	.234	5.953

INCHES		M M
FRACTIONS	DECIMALS	
—	.2362	6.
1/4	.250	6.350
—	.2559	6.5
17/64	.2656	6.747
—	.2756	7.
9/32	.281	7.144
—	.2953	7.5
19/64	.297	7.541
5/16	.312	7.938
—	.315	8.
21/64	.328	8.334
—	.335	8.5
11/32	.344	8.731
—	.3543	9.
23/64	.359	9.128
—	.374	9.5
3/8	.375	9.525
25/64	.391	9.922
—	.3937	10.
13/32	.406	10.319
—	.413	10.5
27/64	.422	10.716
—	.4331	11.
7/16	.438	11.113
29/64	.453	11.509
15/32	.469	11.906
—	.4724	12.
31/64	.484	12.303
—	.492	12.5
1/2	.500	12.700

INCHES		M M
FRACTIONS	DECIMALS	
—	.5118	13.
33/64	.5156	13.097
17/32	.531	13.494
35/64	.547	13.891
—	.5512	14.
9/16	.563	14.288
—	.571	14.5
37/64	.578	14.684
—	.5906	15.
19/32	.594	15.081
39/64	.609	15.478
5/8	.625	15.875
—	.6299	16.
41/64	.6406	16.272
—	.6496	16.5
21/32	.656	16.669
—	.6693	17.
43/64	.672	17.066
11/16	.6875	17.463
45/64	.703	17.859
—	.7087	18.
23/32	.719	18.256
—	.7283	18.5
47/64	.734	18.653
—	.7480	19.
3/4	.750	19.050
49/64	.7656	19.447
25/32	.781	19.844
—	.7874	20.
51/64	.797	20.241

INCHES		M M
FRACTIONS	DECIMALS	
13/16	.8125	20.638
—	.8268	21.
53/64	.828	21.034
27/32	.844	21.431
55/64	.859	21.828
—	.8661	22.
7/8	.875	22.225
57/64	.8906	22.622
—	.9055	23.
29/32	.9062	23.019
59/64	.922	23.416
15/16	.9375	23.813
—	.9449	24.
61/64	.953	24.209
31/32	.969	24.606
—	.9843	25.
63/64	.9844	25.003
1	1.000	25.400
—	1.0236	26.

American and Metric wrench sizes are taken across the flats of the bolt head; Whitworth size is taken from outside diameter of threads.



MASTER SOCKET WRENCH SETS

1/4" SQUARE DRIVE 32-PC. SET NO. 4700-D

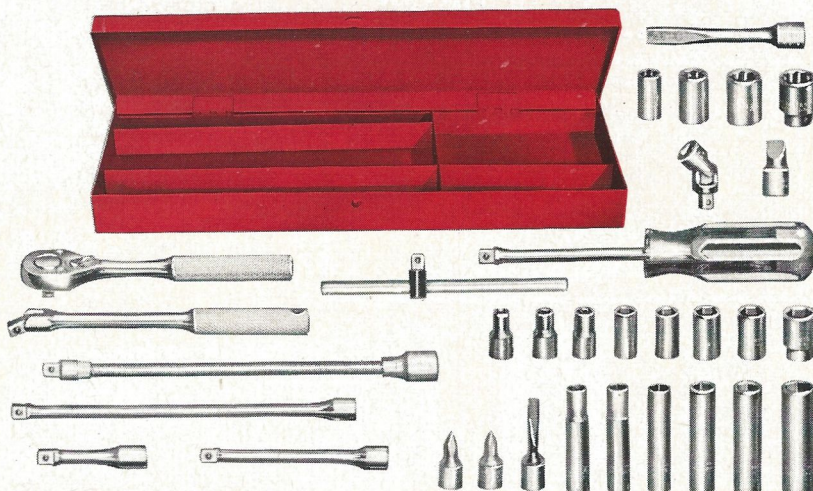
A Utility set for auto, aircraft and all repair and assembly work where tiny socket wrenches are necessary.



CONTENTS OF SET

NO.	DESCRIPTION
4706	Regular Socket, 6-Point, 3/16" Opening
4707	Regular Socket, 6-Point, 7/32" Opening
4708	Regular Socket, 6-Point, 1/4" Opening
4709	Regular Socket, 6-Point, 9/32" Opening
4710	Regular Socket, 6-Point, 5/16" Opening
4711	Regular Socket, 6-Point, 11/32" Opening
4712	Regular Socket, 6-Point, 3/8" Opening
4714	Regular Socket, 6-Point, 7/16" Opening
4708L	Deep Socket, 6-Point, 1/4" Opening
4709L	Deep Socket, 6-Point, 9/32" Opening
4710L	Deep Socket, 6-Point, 5/16" Opening
4711L	Deep Socket, 6-Point, 11/32" Opening
4712L	Deep Socket, 6-Point, 3/8" Opening
4714L	Deep Socket, 6-Point, 7/16" Opening
4708S	Regular Socket, 8-Point, 1/4" Opening
4710S	Regular Socket, 8-Point, 5/16" Opening
4712S	Regular Socket, 8-Point, 3/8" Opening
4716T	Regular Socket, 12-Point, 1/2" Opening
4737	Phillips Socket Screw Driver, #1
4738	Phillips Socket Screw Driver, #2
4743	Socket Screw Driver, 3/8" Tip
4744	Socket Screw Driver, 3/16" Tip
4745	Socket Screw Driver, 1/4" Tip
4749	Ratchet
4759	Extension, 2"
4760	Extension, 4"
4761	Extension, 6"
4765	Flexible Extension, 6"
4766	Hinge Handle
4769	Plastic Handle
4770	Universal Joint
4785	Sliding Bar
4796	Metal Box

(Boxes available separately, See Page 70)
Weight of Set, 2.93 Lbs.



SET NO. 4900A HOLLOW HEAD SCREW SOCKETS

No-spill tray holds 10 Allen-type sockets; seven 3/8" drive for screws 1/8"-3/8"; three 1/2" drive for screws 1/2", 9/16", 5/8".

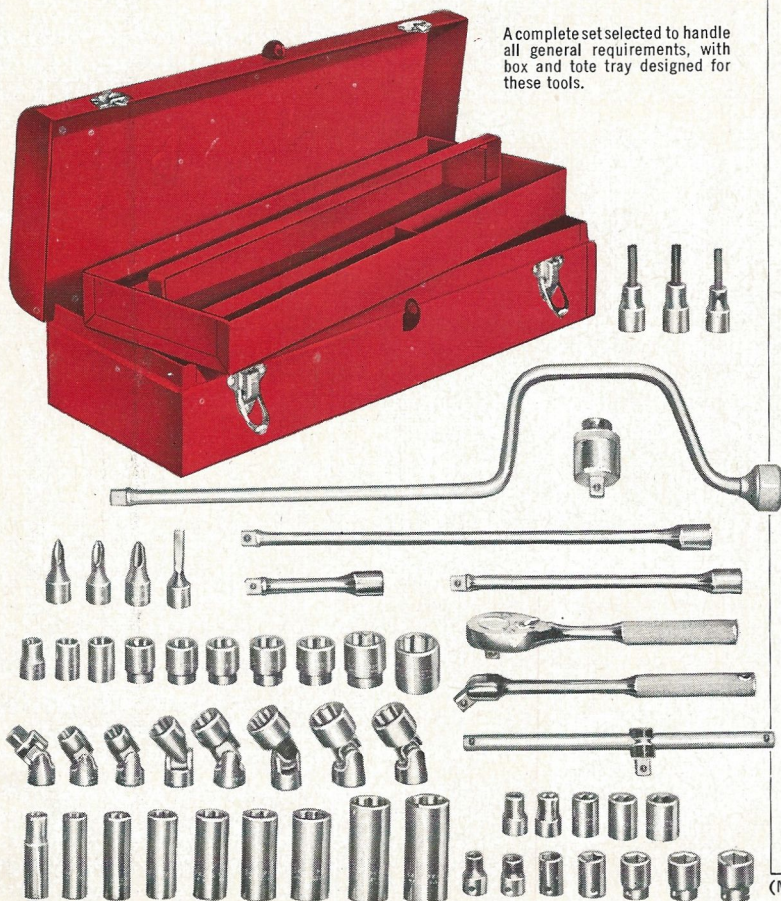
CONTENTS OF SET NO. 5200-G

NO.	DESCRIPTION	SET 5200-G
4990-3/16	Allen Type Socket, 3/16" Bit	1
4990-7/32	Allen Type Socket, 7/32" Bit	1
4990-1/4	Allen Type Socket, 1/4" Bit	1
5012	Deep Socket, 12-Point, 3/8" Opening	1
5014	Deep Socket, 12-Point, 7/16" Opening	1
5016	Deep Socket, 12-Point, 1/2" Opening	1
5018	Deep Socket, 12-Point, 9/16" Opening	1
5020	Deep Socket, 12-Point, 5/8" Opening	1
5022	Deep Socket, 12-Point, 11/16" Opening	1
5024	Deep Socket, 12-Point, 3/4" Opening	1
5026	Deep Socket, 12-Point, 13/16" Opening	1
5028	Deep Socket, 12-Point, 7/8" Opening	1
5212	Regular Socket, 12-Point, 3/8" Opening	1
5214	Regular Socket, 12-Point, 7/16" Opening	1
5216	Regular Socket, 12-Point, 1/2" Opening	1
5218	Regular Socket, 12-Point, 9/16" Opening	1
5219	Regular Socket, 12-Point, 19/32" Opening	1
5220	Regular Socket, 12-Point, 5/8" Opening	1
5222	Regular Socket, 12-Point, 11/16" Opening	1
5224	Regular Socket, 12-Point, 3/4" Opening	1
5226	Regular Socket, 12-Point, 13/16" Opening	1
5228	Regular Socket, 12-Point, 7/8" Opening	1
5210H	Regular Socket, 6-Point, 5/16" Opening	1
5212H	Regular Socket, 6-Point, 3/8" Opening	1
5214H	Regular Socket, 6-Point, 7/16" Opening	1
5216H	Regular Socket, 6-Point, 1/2" Opening	1
5218H	Regular Socket, 6-Point, 9/16" Opening	1
5220H	Regular Socket, 6-Point, 5/8" Opening	1
5222H	Regular Socket, 6-Point, 11/16" Opening	1
5208S	Regular Socket, 8-Point, 1/4" Opening	1
5210S	Regular Socket, 8-Point, 5/16" Opening	1
5212S	Regular Socket, 8-Point, 3/8" Opening	1
5214S	Regular Socket, 8-Point, 7/16" Opening	1
5216S	Regular Socket, 8-Point, 1/2" Opening	1
5241	Phillips Socket Screw Driver, #2	1
5242	Phillips Socket Screw Driver, #3	1
5243	Phillips Socket Screw Driver, #4	1
5246	Socket Screw Driver, 1/4" x .030" Tip	1
5247	Ratchet Adaptor	1
5249	Ratchet	1
5260	Extension, 3 1/2"	1
5261	Extension, 7 1/2"	1
5262	Extension, 12"	1
5265	Hinge Handle	1
5270	Universal Joint	1
5273	Universal Socket, 12-Point, 3/8" Opening	1
5274	Universal Socket, 12-Point, 7/16" Opening	1
5275	Universal Socket, 12-Point, 1/2" Opening	1
5276	Universal Socket, 12-Point, 9/16" Opening	1
5277	Universal Socket, 12-Point, 5/8" Opening	1
5278	Universal Socket, 12-Point, 11/16" Opening	1
5279	Universal Socket, 12-Point, 3/4" Opening	1
5280	Speed Handle	1
5285	Sliding Bar	1
5296	Metal Box (10.0 Lbs.)	1

(Metal Boxes Available Separately.
—See Pages 69-70)

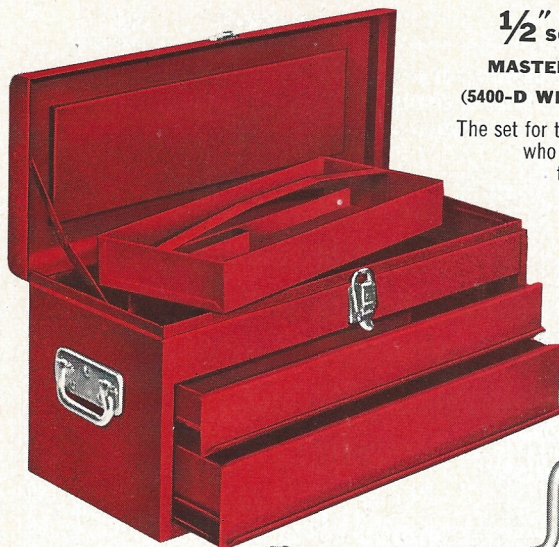
Weight of Set 17.53 Lbs.

3/8" SQUARE DRIVE 54-PC. GENERAL SET NO. 5200-G



A complete set selected to handle all general requirements, with box and tote tray designed for these tools.

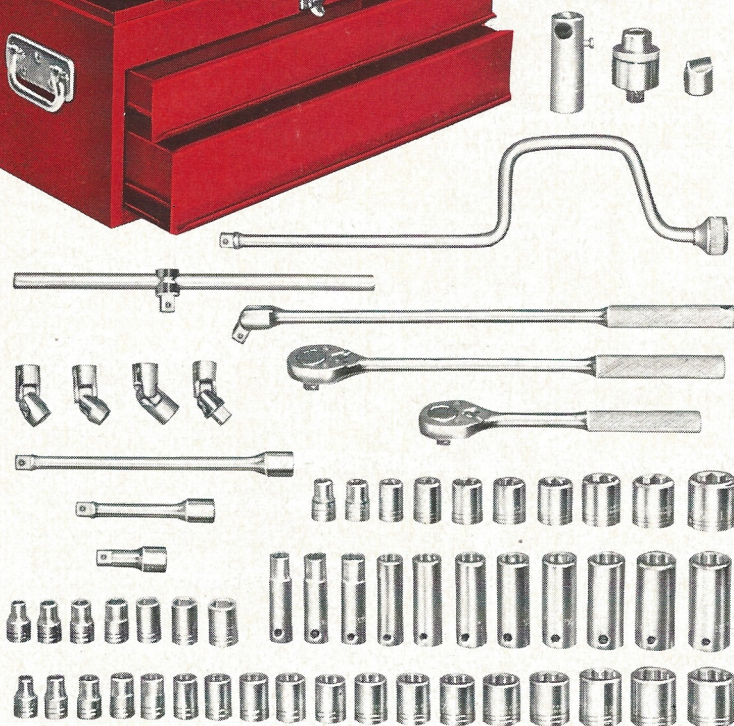
MASTER SOCKET WRENCH SETS



1/2" SQUARE DRIVE 61-PC.

MASTER SET NO. 5400-E
(5400-D WITHOUT METAL BOX)

The set for the professional mechanic who needs complete coverage for every nut-turning job. Contains every size and type 1/2" socket, plus a wide range of attachments to speed any job.

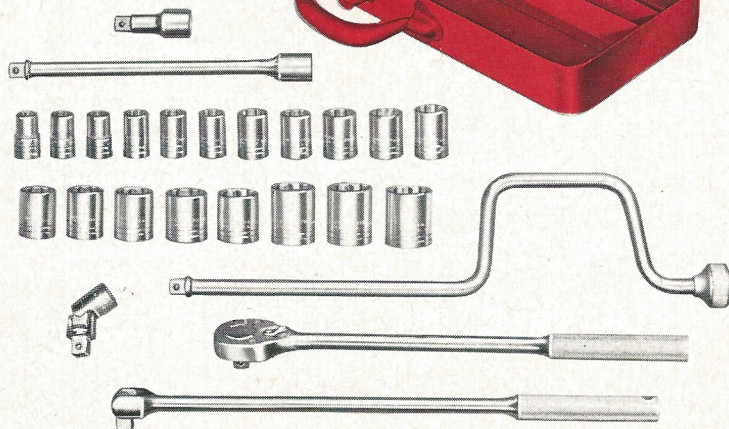
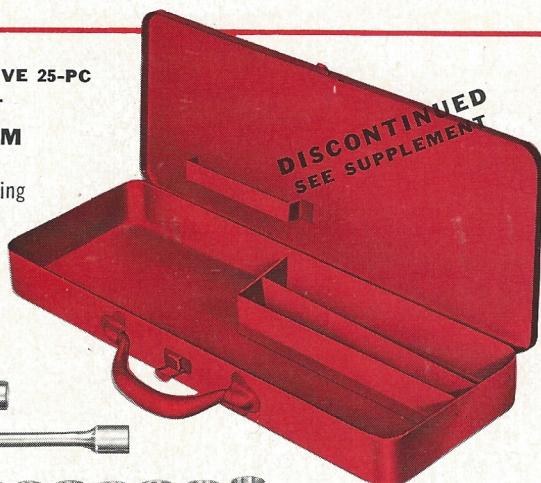


1/2" SQUARE DRIVE 25-PC

METRIC SOCKET

SET NO. 5400-M

25 basic sockets and attachments for turning practically any hex nut in any general service job.



CONTENTS OF SETS NO. 5400-E AND 5400-M

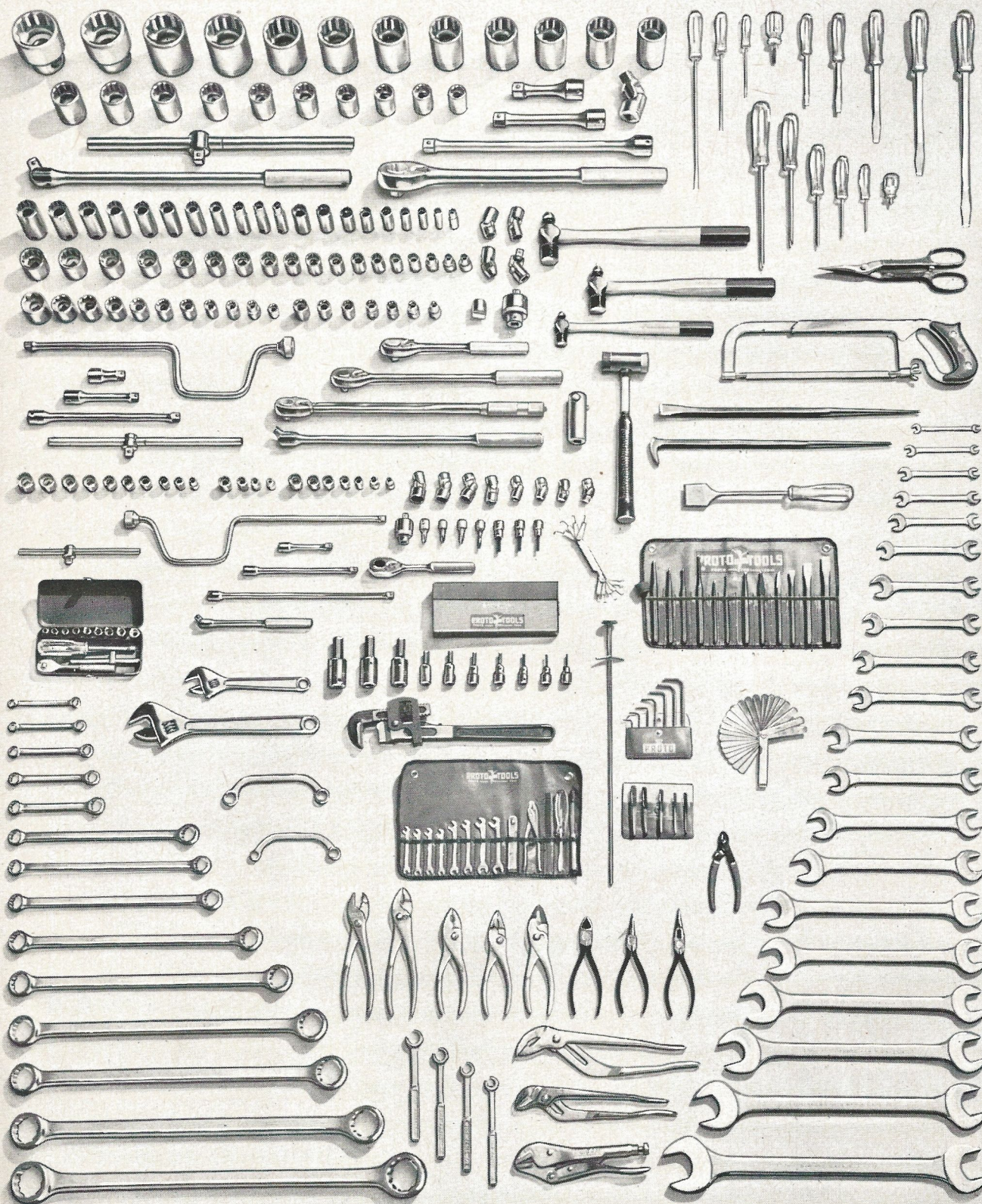
NO.	DESCRIPTION	SET 5400-E *5400-D	SET 5400-M
4515	Stud Remover	1	
5316	Deep Socket, 12-Point, 1/2" Opening	1	
5318	Deep Socket, 12-Point, 9/16" Opening	1	
5320	Deep Socket, 12-Point, 5/8" Opening	1	
5322	Deep Socket, 12-Point, 11/16" Opening	1	
5324	Deep Socket, 12-Point, 3/4" Opening	1	
5326	Deep Socket, 12-Point, 13/16" Opening	1	
5328	Deep Socket, 12-Point, 7/8" Opening	1	
5330	Deep Socket, 12-Point, 15/16" Opening	1	
5332	Deep Socket, 12-Point, 1" Opening	1	
5334	Deep Socket, 12-Point, 1 1/16" Opening	1	
5336	Deep Socket, 12-Point, 1 1/8" Opening	1	
5412	Regular Socket, 12-Point, 3/8" Opening	1	
5414	Regular Socket, 12-Point, 7/16" Opening	1	
5416	Regular Socket, 12-Point, 1/2" Opening	1	
5418	Regular Socket, 12-Point, 9/16" Opening	1	
5419	Regular Socket, 12-Point, 19/32" Opening	1	
5420	Regular Socket, 12-Point, 5/8" Opening	1	
5422	Regular Socket, 12-Point, 11/16" Opening	1	
5424	Regular Socket, 12-Point, 3/4" Opening	1	
5425	Regular Socket, 12-Point, 25/32" Opening	1	
5426	Regular Socket, 12-Point, 13/16" Opening	1	
5428	Regular Socket, 12-Point, 7/8" Opening	1	
5429	Regular Socket, 12-Point, 29/32" Opening	1	
5430	Regular Socket, 12-Point, 15/16" Opening	1	
5432	Regular Socket, 12-Point, 1" Opening	1	
5434	Regular Socket, 12-Point, 1 1/16" Opening	1	
5436	Regular Socket, 12-Point, 1 1/8" Opening	1	
5438	Regular Socket, 12-Point, 1 3/16" Opening	1	
5440	Regular Socket, 12-Point, 1 1/4" Opening	1	
5412H	Regular Socket, 6-Point, 3/8" Opening	1	
5414H	Regular Socket, 6-Point, 7/16" Opening	1	
5416H	Regular Socket, 6-Point, 1/2" Opening	1	
5418H	Regular Socket, 6-Point, 9/16" Opening	1	
5420H	Regular Socket, 6-Point, 5/8" Opening	1	
5422H	Regular Socket, 6-Point, 11/16" Opening	1	
5424H	Regular Socket, 6-Point, 3/4" Opening	1	
5412S	Regular Socket, 8-Point, 3/8" Opening	1	
5414S	Regular Socket, 8-Point, 7/16" Opening	1	
5416S	Regular Socket, 8-Point, 1/2" Opening	1	
5418S	Regular Socket, 8-Point, 9/16" Opening	1	
5420S	Regular Socket, 8-Point, 5/8" Opening	1	
5422S	Regular Socket, 8-Point, 11/16" Opening	1	
5424S	Regular Socket, 8-Point, 3/4" Opening	1	
5426S	Regular Socket, 8-Point, 13/16" Opening	1	
5428S	Regular Socket, 8-Point, 7/8" Opening	1	
5432S	Regular Socket, 8-Point, 1" Opening	1	
5412M	Metric Socket, 12-Point, 12MM Opening		1
5413M	Metric Socket, 12-Point, 13MM Opening		1
5414M	Metric Socket, 12-Point, 14MM Opening		1
5415M	Metric Socket, 12-Point, 15MM Opening		1
5416M	Metric Socket, 12-Point, 16MM Opening		1
5417M	Metric Socket, 12-Point, 17MM Opening		1
5418M	Metric Socket, 12-Point, 18MM Opening		1
5419M	Metric Socket, 12-Point, 19MM Opening		1
5420M	Metric Socket, 12-Point, 20MM Opening		1
5421M	Metric Socket, 12-Point, 21MM Opening		1
5422M	Metric Socket, 12-Point, 22MM Opening		1
5423M	Metric Socket, 12-Point, 23MM Opening		1
5424M	Metric Socket, 12-Point, 24MM Opening		1
5425M	Metric Socket, 12-Point, 25MM Opening		1
5426M	Metric Socket, 12-Point, 26MM Opening		1
5427M	Metric Socket, 12-Point, 27MM Opening		1
5428M	Metric Socket, 12-Point, 28MM Opening		1
5429M	Metric Socket, 12-Point, 29MM Opening		1
5430M	Metric Socket, 12-Point, 30MM Opening		1
5446	Screw Driver Socket, 15/16" x .150"	1	
5447	Ratchet Adapter	1	
5449	Ratchet, 10"	1	1
5450	Ratchet, 15"	1	
5460	Extension, 2 1/2"	1	1
5461	Extension, 5"	1	
5463	Extension, 10"	1	1
5468	Hinge Handle	1	1
5470	Universal Joint	1	1
5475	Universal Socket, 12-Point, 1/2" Opening	1	
5476	Universal Socket, 12-Point, 9/16" Opening	1	
5477	Universal Socket, 12-Point, 5/8" Opening	1	
5480	Speed Handle	1	1
5485	Sliding Handle	1	
5495	DISCONTINUED		1
9991	Metal Box	1	
(Metal Boxes Available Separately. See Pages 69-70)			
* 5400-D is same as 5400-E but without Metal Box		Weight of Set 5400-D... Weight of Box 9991.... Weight of Set 5400-E....	25.03 Lb 31.00 Lb 56.03 Lb

NO. 9901-A MAINTENANCE MASTER SET



PROTO custom-balanced this complete set of 286 tools to fill the job requirements of all types of factory, utility, railroad, refinery and other industrial maintenance. The

selection is perfect for mechanics who repair automobiles, trucks, buses, aircraft, tractors, farm implements and construction equipment.



NO.	DESCRIPTION	PAGE
000 A	Standard Gauge Set.....	2
000 K	Spark Plug Gauge Set.....	2
2	Punch and Chisel Set, 12".....	5
202	Thin Jaw Plier, 6 1/2".....	6
203	Bent Nose Plier, 6 3/4".....	6
206	Diagonal Plier, 6".....	6
225	Curved Needle Nose Plier, 6".....	8
226	Needle Nose Plier, 6 3/4".....	8
243	Power-Track Plier, 10".....	10
246	Combination Side Cutting Plier, 6".....	10
248 P	Pipe Jaw Plier, 11 1/4".....	10
252	Hose Clamp Plier, 8 1/4".....	11
278	Slip Joint Plier, 8".....	11
291	Lever Wrench Plier, 8".....	11
299	Wire Stripper Plier, 5".....	12
310	Duck Bill Snip, 10".....	14
352	Adjustable Hack Saw.....	14
708 L	Adjustable Wrench, 8".....	16
712 L	Adjustable Wrench, 12".....	16
814	Pipe Wrench, 14".....	17
1122	Box Wrench, 3/8"x 7 1/8".....	19
1125	Box Wrench, 7/16"x 1 1/2".....	19
1126	Box Wrench, 1/2"x 7/16".....	19
1130	Box Wrench, 9/16"x 5/8".....	19
1131	Box Wrench, 5/8"x 3/4".....	19
1136	Box Wrench, 1 1/16"x 7/8".....	19
1137	Box Wrench, 1 1/16"x 2 5/32".....	19
1139	Box Wrench, 3/4"x 7/8".....	19
1145	Box Wrench, 1 5/16"x 1".....	19
1150	Box Wrench, 1 1/16"x 1 1/8".....	19
1155	Box Wrench, 1 1/4" x 1 5/16".....	19
1160	Box Wrench, 1 1/4"x 1 3/8".....	19
1162	Box Wrench, 1 7/16"x 1 1/2".....	19
1164	Box Wrench, 1 3/8"x 1 11/16".....	19
1304 P	Ball Pein Hammer, 4 ounce.....	24
1312 P	Ball Pein Hammer, 12 ounce.....	24
1316 P	Ball Pein Hammer, 16 ounce.....	24
1362	Plastic Tip Hammer, 16 ounce.....	24
1725	Obstruction Wrench.....	23
1730	Obstruction Wrench.....	23
2120	Pry Bar, 18".....	26
2126	Pry Bar, Roll Head, 16".....	26
2336	Gasket Scraper.....	37
2342	Grab All, 18".....	38
3018	Open End Wrench, 1/4"x 5/16".....	28
3020	Open End Wrench, 5/16"x 3/8".....	28
3021	Open End Wrench, 3/8"x 7/16".....	28
3025	Open End Wrench, 7/16"x 1/2".....	28
3026	Open End Wrench, 1/2"x 9/16".....	28
3030	Open End Wrench, 9/16"x 5/8".....	28
3031	Open End Wrench, 5/8"x 3/4".....	28
3033	Open End Wrench, 1 1/32"x 1 1/16".....	28
3034	Open End Wrench, 5/8"x 1 1/16".....	28

NO.	DESCRIPTION	PAGE
3035	Open End Wrench, 1 1/16"x 3/4".....	28
3038	Open End Wrench, 1 3/16"x 2 5/32".....	28
3039	Open End Wrench, 3/4"x 7/8".....	28
3042	Open End Wrench, 7/8"x 1 5/16".....	28
3045	Open End Wrench, 1 5/16"x 1".....	28
3048	Open End Wrench, 1"x 1 1/8".....	28
3050	Open End Wrench, 1 1/16"x 1 1/8".....	28
3051	Open End Wrench, 1 1/16"x 1 1/4".....	28
3055	Open End Wrench, 1 1/4"x 1 9/16".....	28
3060	Open End Wrench, 1 3/8"x 1 7/16".....	28
3070	Open End Wrench, 1 1/2"x 1 3/8".....	28
3200 C	Ignition Wrench Set, 13 piece.....	28
3714	Flare Nut Wrench.....	30
3716	Flare Nut Wrench.....	30
3718	Flare Nut Wrench.....	30
3720	Flare Nut Wrench.....	30
4700 B	Drive Socket Set, 1/4", 12 piece.....	41
4977	Hex Wrench Set, 7 piece.....	38
4900 A	Hex Wrench Socket Set, 10".....	44
5200 G	General Socket Set, 3/8" Drive (Tools Only, 54 pieces).....	62
5400 D	Master Socket Set, 1/2" Drive (Tools Only, 61 pieces).....	63
5500 A	Heavy Duty Socket Set, 3/4" Square Drive (Tools Only, 29 pieces).....	47
6016	Torque Wrench, 1/2" Drive, Ratchet Hd.....	50
9500 A	Screw Extractors, 5 Piece.....	57
9624	Screwdriver, Cabinet, 1/8"x 4".....	58
9634	Screwdriver, Cabinet, 3/16"x 6".....	58
9636	Screwdriver, Cabinet, 1/4"x 10".....	58
9652	Screwdriver, 1/4"x 1 1/2" Blade.....	59
9671	Phillips Screwdriver, #2 point Stubby.....	59
9680	Phillips Screwdriver, #0 point.....	59
9682	Phillips Screwdriver, #1 point.....	59
9684	Phillips Screwdriver, #2 point.....	59
9686	Phillips Screwdriver, #3 point.....	59
9688	Phillips Screwdriver, #4 point.....	59
9804	Screwdriver, 1/4"x 4" Blade.....	58
9806	Screwdriver, 5/16"x 6" Blade.....	58
9808	Screwdriver, 3/8"x 8" Blade.....	58
9812	Screwdriver, 3/8"x 12" Blade.....	58
9832	Screwdriver, 3/16"x 4" Blade.....	58

NO. 9902-A MAINTENANCE MASTER SET WITH TOOLMOBILE

This set includes all the tools in Set 9901-A listed above, plus Toolmobile cabinet No. 9968, 9968-1, 9968-2 and 9968-6. (See descriptions on page 68.) These big cabinets are job-designed for orderly, secure storage of a complete set of tools and easy moving of tools to the job. Interchangeable drawers and partitions enable you to arrange many combinations to suit your own convenience.



Single Lock Drop-front
Closes Entire Cabinet

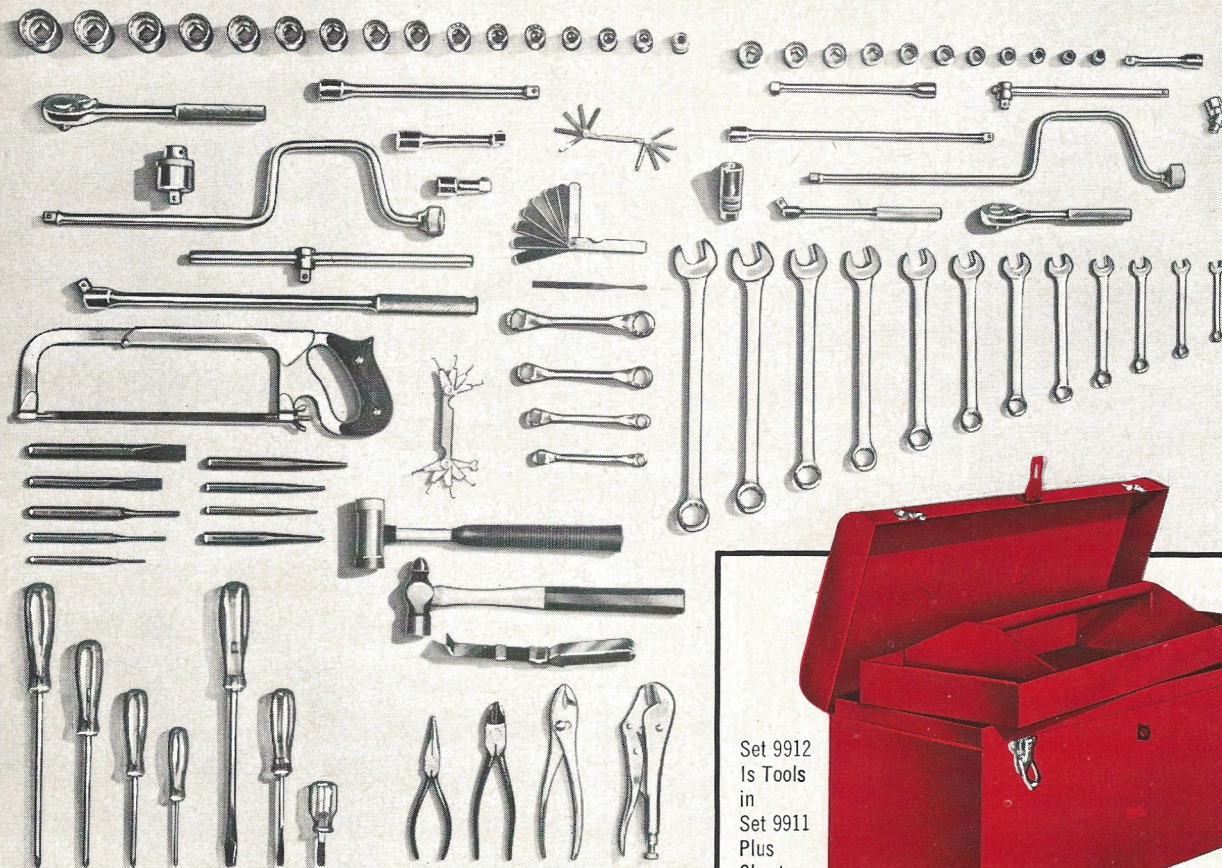


Weight, Tools and Toolmobile
Cabinet, 302.49 Pounds

NO. 9911 BASIC TOOL SET (SET NO. 9912, SEE BOTTOM OF PAGE)



This popular PROTO set includes 88 most needed tools for the mechanic's everyday service and repair requirements. It is an ideal basic starting set to which other tools may be added as needs arise.



Set 9912
Is Tools
in
Set 9911
Plus
Chest



NO.	DESCRIPTION	PAGE	NO.	DESCRIPTION	PAGE	NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set.....	2	2337	Carbon Scraper.....	38	5432	Reg. Socket, 12 Pt. 1".....	44
000 D	Ignition Gauge Set.....	2	5026 HP	Spark Plug Socket.....	38	5434	Reg. Socket, 12 Pt. 1 1/16".....	44
000 K	Spark Plug Gauge Set.....	2	5210 H	Reg. Socket, 6 Pt. 5/16".....	43	5436	Reg. Socket, 12 Pt. 1 1/8".....	44
41 1/2	Center Punch, 1/2"x 5 3/8".....	5	5212	Reg. Socket, 12 Pt. 3/8".....	43	5438	Reg. Socket, 12 Pt. 1 3/16".....	44
47 5/16 x 1/8	Pin Punch, 1/8"x 5 1/4".....	5	5214	Reg. Socket, 12 Pt. 7/16".....	43	5440	Reg. Socket, 12 Pt. 1 1/4".....	44
47 3/8 x 3/16	Pin Punch, 3/16"x 6 1/8".....	5	5216	Reg. Socket, 12 Pt. 1/2".....	43	5447	Ratchet Adaptor.....	43
47 1/2 x 1/4	Pin Punch, 1/4"x 6 3/4".....	5	5218	Reg. Socket, 12 Pt. 9/16".....	43	5449	Ratchet, 1/2" Square Drive.....	44
50 5/16	Starting Punch, 1/8"x 5 3/32".....	5	5219	Reg. Socket, 12 Pt. 1 1/32".....	43	5460	Extension Bar, 2 1/2".....	45
50 3/8	Starting Punch, 3/16"x 5 21/32".....	5	5220	Reg. Socket, 12 Pt. 5/8".....	43	5461	Extension Bar, 5".....	45
50 1/2	Starting Punch, 1/4"x 6 1/2".....	5	5222	Reg. Socket, 12 Pt. 1 1/16".....	43	5463	Extension Bar, 10".....	45
86 A 7/16	Cold Chisel, 1/2"x 6 3/16".....	5	5224	Reg. Socket, 12 Pt. 3/4".....	43	5468	Hinge Handle.....	45
86 A 5/8	Cold Chisel, 3/4"x 7 3/16".....	5	5226	Reg. Socket, 12 Pt. 13/16".....	43	5480	Speed Handle.....	45
207	Diagonal Cutting Plier, 7".....	6	5228	Reg. Socket, 12 Pt. 7/8".....	43	5485	Sliding Handle.....	44
220	Chain Nose Plier, 6 3/4".....	6	5249	Ratchet, 3/8" Square Drive.....	44	8160	Box Wrench, 12 Pt. 3/8"x 7/16".....	23
278	Slip Joint Plier, 8".....	11	5260	Extension Bar, 3 1/2".....	43	8161	Box Wrench, 12 Pt. 1/2"x 9/16".....	23
291	Lever Wrench Plier.....	11	5261	Extension Bar, 7 1/2".....	43	8162	Box Wrench, 12 Pt. 5/8"x 1 1/16".....	23
352	Hack Saw.....	14	5262	Extension Bar, 12".....	43	8163	Box Wrench, 12 Pt. 3/4"x 1 3/16".....	23
1210	Comb. Wrench, 12 Pt. 5/16".....	21	5265	Hinge Handle.....	43	9604	Screwdriver, 1/4"x 4".....	58
1212	Comb. Wrench, 12 Pt. 3/8".....	21	5270	Universal Joint.....	43	9608	Screwdriver, 3/8"x 8".....	58
1214	Comb. Wrench, 12 Pt. 7/16".....	21	5280	Speed Handle.....	43	9652	Screwdriver, 1/4"x 1 1/2".....	59
1216	Comb. Wrench, 12 Pt. 1/2".....	21	5285	Sliding Bar.....	43	9682	Phillips Screwdriver, #1.....	59
1218	Comb. Wrench, 12 Pt. 9/16".....	21	5414	Reg. Socket, 12 Pt. 7/16".....	44	9684	Phillips Screwdriver, #2.....	59
1220	Comb. Wrench, 12 Pt. 5/8".....	21	5416	Reg. Socket, 12 Pt. 1/2".....	44	9686	Phillips Screwdriver, #3.....	59
1222	Comb. Wrench, 12 Pt. 1 1/16".....	21	5418	Reg. Socket, 12 Pt. 9/16".....	44	9688	Phillips Screwdriver, #4.....	59
1224	Comb. Wrench, 12 Pt. 3/4".....	21	5419	Reg. Socket, 12 Pt. 1 1/32".....	44	9975	Metal Box.....	69
1226	Comb. Wrench, 12 Pt. 13/16".....	21	5420	Reg. Socket, 12 Pt. 7/8".....	44			
1228	Comb. Wrench, 12 Pt. 7/8".....	21	5422	Reg. Socket, 12 Pt. 1 1/16".....	44			
1230	Comb. Wrench, 12 Pt. 1 1/16".....	21	5424	Reg. Socket, 12 Pt. 3/4".....	44			
1232	Comb. Wrench, 12 Pt. 1".....	21	5425	Reg. Socket, 12 Pt. 2 3/32".....	44			
1312 P	Ball Pein Hammer, 12 Ounce.....	24	5426	Reg. Socket, 12 Pt. 13/16".....	44			
1362	Plastic Tip Hammer, 16 Ounce.....	24	5428	Reg. Socket, 12 Pt. 7/8".....	44			
2302	Ignition Point File, 5".....	39	5430	Reg. Socket, 12 Pt. 1 5/16".....	44			

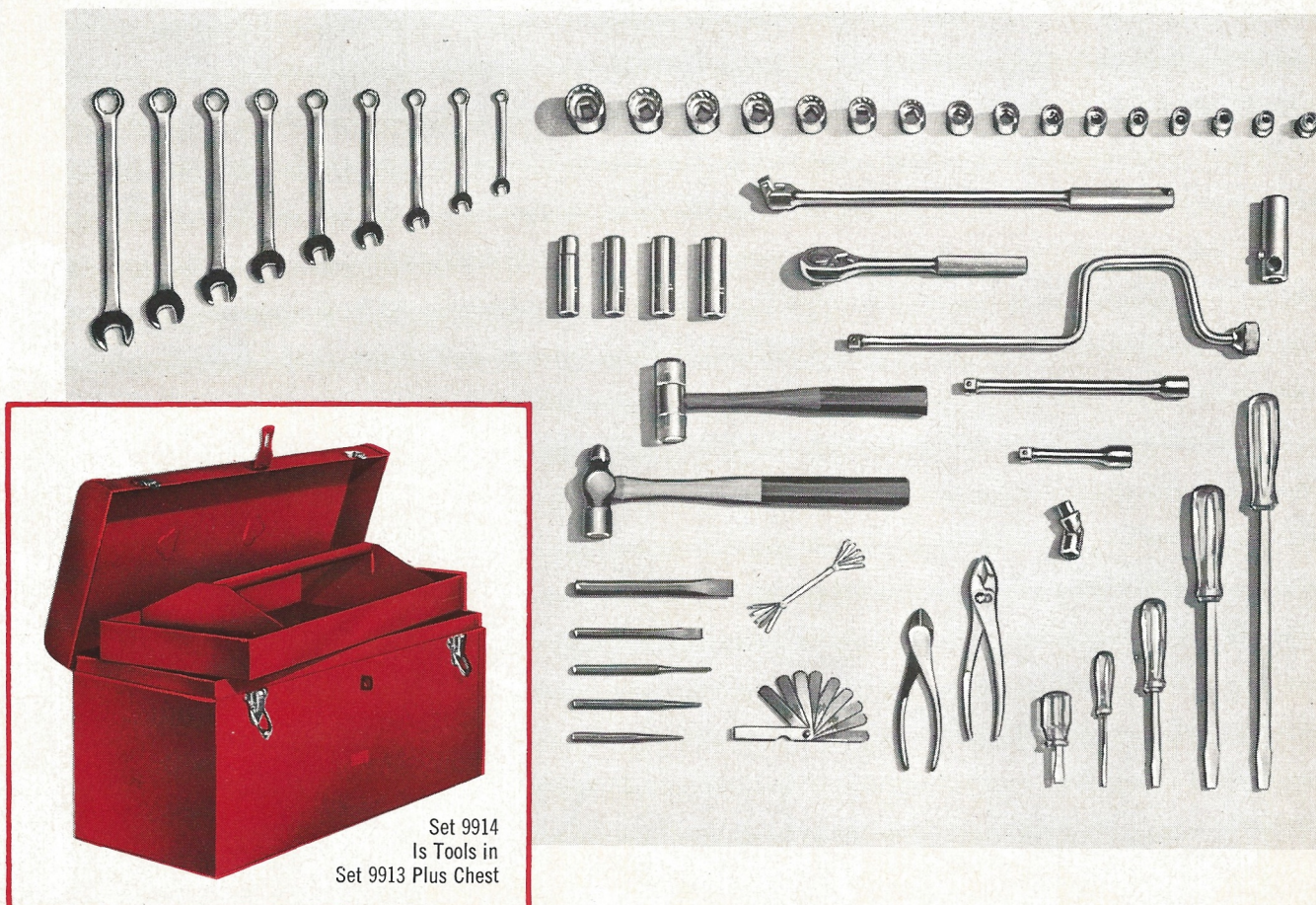
Set No. 9911, Tools Only, Wt. 31.47 Lbs.

SET NO. 9912

Tools in Set 9911 plus no. 9975 steel tool chest (described on page 70.) Weight 42.47 pounds.

NO. 9913 APPRENTICE TOOL SET (SET NO. 9914, SEE BOTTOM OF PAGE)

Here are 52 basic tools that enable you to do most service work efficiently, with a low initial investment in fine quality PROTO tools. Additional tools can be added until you have a complete mechanic's set.



Set 9914
Is Tools in
Set 9913 Plus Chest

NO.	DESCRIPTION	PAGE	NO.	DESCRIPTION	PAGE	NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set.....	2	4515	Stud Remover.....	35	5440	Reg. Socket, 12 Pt. 1 1/4"....	44
000 D	Ignition Gauge Set.....	2	5320	Deep Socket, 12 Pt. 5/8"....	44	5449	Ratchet.....	44
41 3/8	Center Punch, 3/8"x 4 29/32"...	5	5322	Deep Socket, 12 Pt. 1 1/16"....	44	5461	Extension Bar, 5".....	45
47 3/8 x 3/16	Pin Punch, 3/16"x 6 1/8".....	5	5324	Deep Socket, 12 Pt. 3/4"....	44	5463	Extension Bar, 10".....	45
50 3/8	Starting Punch, 3/16"x 5 2 1/2"...	5	5326	Deep Socket, 12 Pt. 1 3/16"....	44	5468	Hinge Handle.....	45
86 A 3/8	Cold Chisel, 7/16"x 5 5/8".....	5	5412	Reg. Socket, 12 Pt. 3/8"....	44	5470	Universal Joint.....	45
86 A 5/8	Cold Chisel, 3/4"x 7 3/16".....	5	5414	Reg. Socket, 12 Pt. 7/16"....	44	5480	Speed Handle.....	45
209	Diagonal Cutting Plier, 7"....	6	5416	Reg. Socket, 12 Pt. 1/2"....	44	9623	Screwdriver, 1/8"x 3".....	58
278	Slip Joint Plier, 8".....	10	5418	Reg. Socket, 12 Pt. 9/16"....	44	9652	Screwdriver, 1/4"x 1 1/2"....	59
1212	Comb. Wrench, 12 Pt. 3/8"....	21	5419	Reg. Socket, 12 Pt. 1 1/32"....	44	9804	Screwdriver, 1/4"x 4".....	58
1214	Comb. Wrench, 12 Pt. 7/16"....	21	5420	Reg. Socket, 12 Pt. 5/8"....	44	9808	Screwdriver, 3/8"x 8".....	58
1216	Comb. Wrench, 12 Pt. 1/2"....	21	5422	Reg. Socket, 12 Pt. 1 1/16"....	44	9812	Screwdriver, 3/8"x 12".....	58
1218	Comb. Wrench, 12 Pt. 9/16"....	21	5424	Reg. Socket, 12 Pt. 3/4"....	44	9975	Metal Box.....	69
1220	Comb. Wrench, 12 Pt. 5/8"....	21	5425	Reg. Socket, 12 Pt. 2 5/32"....	44			
1222	Comb. Wrench, 12 Pt. 1 1/16"....	21	5426	Reg. Socket, 12 Pt. 1 3/16"....	44			
1224	Comb. Wrench, 12 Pt. 3/4"....	21	5428	Reg. Socket, 12 Pt. 7/8"....	44			
1226	Comb. Wrench, 12 Pt. 1 3/16"....	21	5430	Reg. Socket, 12 Pt. 1 5/16"....	44			
1228	Comb. Wrench, 12 Pt. 7/8"....	21	5432	Reg. Socket, 12 Pt. 1".....	44			
1316 P	Ball Pein Hammer, 16 Ounce.	24	5434	Reg. Socket, 12 Pt. 1 1/16"....	44			
1383	Plastic Tip Hammer, 12 Ounce.	24	5436	Reg. Socket, 12 Pt. 1 1/8"....	44			

Set No. 9913, Tools Only, Wt. 20.30 Lbs.

SET NO. 9914

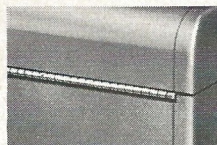
Tools in set no. 9913 plus no. 9975 steel tool chest (described on page 70). Weight 31.30 pounds

STEEL TOOL BOXES, CHESTS AND CABINETS



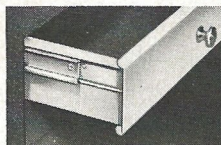
PROTO boxes, chests and kits are designed with a practical on-the-job knowledge of the needs of the professional tool users. Heavy gauge steel, electrical welding, reinforced construction make them rugged, rigid and

long lasting. There are models for every type of work, with drawers and trays partitioned to help you find the right tool without wasting time. Baked red finish is durable and good looking.



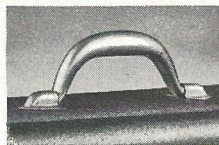
PIANO TYPE HINGES

are full length, electrically welded, assure great strength, proper fitting doors and lids.



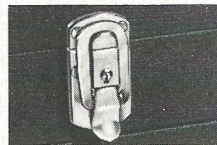
DRAWERS PULL EASILY

when heavily loaded. They can't spill. Compound runners welded to chest for rigidity.



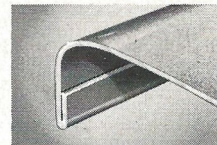
STRONG HANDLES

are shaped to the hand, big enough to lift heavy chests without pinching fingers.



LOCKS AND CATCHES

are heavy, nickel plated or enameled, accurately fitted, riveted securely.



HEAVY GAUGE STEEL

with double rolled or hemmed edges, electrically welded, make PROTO chests rugged.

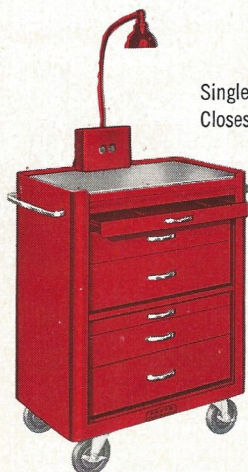
"TOOLMOBILE"® MOBILE TOOL CABINETS FEATURING INTERCHANGEABLE DRAWERS

You'll be mighty proud when you own a gleaming, sturdy "Toolmobile"—true mark of a professional tool user. Saving hours by taking needed tools on the job, and preventing tool losses, a "Toolmobile" soon pays for itself.

Biggest feature is the interchangeability of drawers, which makes every "Toolmobile" a custom-built cabinet for its owner. Easy-to-move drawer runners, that fit into notches spaced every 2" from top to bottom, permit any of three basic sizes of drawers to be arranged in many combinations.



9968



Single Lock Drop-front
Closes Entire Cabinet



9968-B



9968-A

Big rubber casters roll easily over electric cords, uneven floors.

INDIVIDUAL "TOOLMOBILE" PARTS

CABINET AND PART NUMBERS	DESCRIPTION	PARTS IN NO. 9968 ASSEMBLY WEIGHT 112 LBS.	PARTS IN NO. 9968A ASSEMBLY WEIGHT 133 LBS.	PARTS IN NO. 9968B ASSEMBLY WEIGHT 159 LBS.
9968-1	Basic Cabinet with 18" x 28" Masonite top, drop front, lock, two keys, four casters and two handles. Overall dimensions 31 7/8" x 18" x 52 1/2" high	1	1	1
9968-2	Shallow Drawer and Runners 21 5/8" x 16" x 1 1/2" deep (Inside) Wt. 8.0 Lbs. Has perforated sections which can be punched out to form holes for drawer divider bolts	1	1	2
9968-2*	Medium Drawer and Runners 21 5/8" x 16" x 3 1/2" deep (Inside) Wt. 9.8 Lbs. Has "punch out" bolt holes and reinforced bottom	1	1	2
9968-3*	Deep Drawer and Runners 21 5/8" x 16" x 5 1/2" deep (Inside) Wt. 12.0 Lbs. Has "punch out" bolt holes and reinforced bottom	1	1	2
9968-4*	Drawer Divider Set, Wt. .90 Lbs. Has two slotted sides and four partitions which form various compartments	1	1	2
9968-5*	Complete Light Assembly, Wt. 4.4 Lbs., with flexible gooseneck that reaches over front for lighting drawers, two outlets and 8 Ft. cord		1	1
9968-6*	Door for Bottom section, Wt. 4.7 Lbs.		1	

* May be ordered separately.

MORE BIG "TOOLMOBILE" FEATURES

- Ruggedly constructed of heavy-gauge welded steel. Critical points strongly reinforced. Round corners, extra heavy channels across bottom, double side walls, hemmed drawer edges and midfront stiffener assure rigidity and proper drawer alignment.
- Drawers have outside depths of 2", 4" and 6" to permit various arrangements in the 2"-spaced drawer runner notches. Bottom compartment is 12" deep, which allows also for interchanging drawers.
- Four-roller drawers move at finger's touch. Double-supported roller axles take heavy load.
- Semi-soft, tough rubber, 5" casters on husky ball-bearing swivel plates—each held by four bolts—roll easily and quietly, and reduce tool jarring.
- Two casters have handy foot-operated brakes.
- Single-lock front closes entire cabinet. Folds and slides out of way under top when unlocked.
- Rail around three sides of top keeps tools from rolling off and holds socket wrench racks.
- Two 15" handles make cabinet easy to maneuver.
- Finish is lustrous red, with smart chrome trim.

ALL-PURPOSE TOOL CHESTS

NO. 9980 UTILITY TOOL CHEST

This low priced, high quality chest is ideal for tool users who want maximum space with minimum weight. Top fixed tray has two compartments. Large bottom space has one partition. Strong hasp on lid fits over staple on drop-front for locking.



DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	22 1/4"	9"	6 9/16"	10
Top Fixed Tray	21 7/8"	3 7/8"	1 13/16"	
Bottom Compartment	21 7/8"	8 9/16"	6 1/2"	

NO. 9989 SERVICE TOOL CHEST

Big and rugged, this chest has space for carrying plenty of tools to just about any job. Deluxe features include a 2-compartment hinged tray which swings up with the lid, removable tote tray with 2 compartments and full length handle, large lower compartment divided by a partition, 3 full length piano type hinges. Front plate hinged to lid folds back when open, drops to engage hasp and staple for locking.



DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	20 9/16"	11 9/16"	9"	19
Hinged Tray	19 7/16"	5"	1 1/2"	
Fixed Top Tray	20 1/2"	4 5/8"	3 1/16"	
Tote Tray	19 15/16"	5 7/16"	1 1/2"	
Bottom space	20 1/2"	11 7/16"	4 7/8"	

NO. 9990 MECHANICS TOOL CHEST

Designed for midget and large tools, this versatile chest is popular with mechanics requiring tools for all types of work. Five drawers: three small, one medium, one large with two compartments. Hinged tray with three compartments swings up with lid. Fixed tray is at back of top area. Roomy inside space has section for large heavy-duty sockets. Hinged lid section overlaps drop-front, with rugged hasp and staple for secure locking.

Fits top of Toolmobile.



DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	24 1/2"	11 1/2"	13"	37
2 Left small drawers	4 13/32"	10 5/16"	1"	
1 Right small drawer	3 7/16"	10 5/16"	2 1/8"	
1 Center medium drawer	11 3/16"	10 5/16"	2 1/8"	
1 Large bottom drawer	20 3/8"	10 5/16"	2 1/4"	
1 Hinged tray	23 3/8"	5 13/16"	1 1/2"	
1 Fixed Tray	24 7/16"	3 1/2"	2 1/2"	
Large inside space	24 7/16"	11 5/16"	5 13/16"	

NO. 9997 MASTER TOOL CHEST

This top quality chest has everything professional mechanics require for proper storing of master sets of tools and carrying of selected tools to their work. It is roomy, rugged, efficient, good looking. Top section is divided into 3 compartments, one holding a removable tote tray with 2 socket compartments, big tool space and rigid non-tilt handle. 6 easy-roll, no-spill drawers: 3 small ones for precision tools, 1 full width shallow drawer with 2 compartments, 1 medium depth with 3 compartments, 1 deep drawer with 2 compartments, all partitions sturdily welded. Lid overlaps chest with snug fit. Front cover plate is hinged to swing back inside lid when chest is open, cover the drawers when closed. Strong tumbler lock secures the chest.

Fits top of Toolmobile.



DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	26"	12"	14 3/8"	65
Tote Tray	19 1/8"	7 3/4"	1 3/4"	
3 Drawers, each	7 1/4"	10 3/16"	1"	
1 Drawer	23 3/4"	10 3/16"	1"	
1 Drawer	23 3/4"	10 3/16"	1 5/8"	
1 Drawer	23 3/4"	10 3/16"	3 1/4"	

ALL PURPOSE TOOL BOXES



NO. 100 HR HIP ROOF TOOL BOX

Popular heavy gauge steel box. Removable tote tray has 13 1/2" socket compartment and full length by 2" compartment easily holding socket sets up to 3/4" drive. 2-piece lid has full length piano hinges. Handles hold box shut while carrying. Durable red finish.

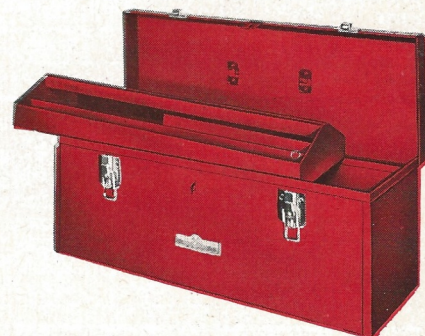
BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	21"	7 3/8"	8 1/2"	10



NOS. 9970 & 9971 HIP ROOF TOOL BOXES

Hold amazing number of tools. Heavy gauge steel box. 2-piece lid with full length piano hinges overlaps top. 2 lever-type fasteners, hinge hasp, comfortable grip handle. Tote tray lifts out. Durable red finish. Two sizes.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
No. 9970	20"	6"	5 1/4"	6.7
No. 9971	19"	7"	8 3/4"	9.3



NO. 9972 & 9975 TOOL BOX

Popular with many types of tool users. Removable tote tray has 3 compartments, big space underneath. Heavy gauge steel. Lid has full length piano hinge, 2 lever-type fasteners, padlock hasp. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
No. 9972	23"	8"	9"	12
No. 9975	20"	8 3/4"	9 1/2"	11.5

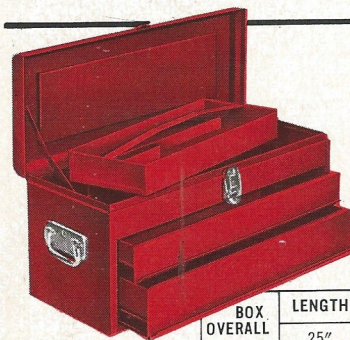
ALL PURPOSE TOOL BOXES [CONT.]



NO. 5296

Heavy gauge steel. Has tote tray with 9 compartments for smaller items. Full length piano hinge. Hasp for padlock. Sturdy metal grip. Durable red finish.

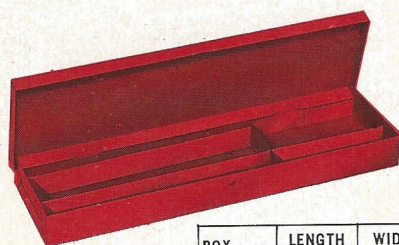
BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	19"	7 1/4"	5"	10.0



NO. 9991

Heavy duty construction—2 compartmented drawers plus tote tray. Reinforced cover actuates positive drawer lock. Truck-type hasp lock on cover; two keys furnished. Fits on Toolmobile. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	25"	11 1/2"	10.0"	33.0



NO. 4796

For 1/4" drive sockets. Has 5 compartments for regular and deep sockets, plus attachments. Resistance welded heavy gauge steel. Durable red finish.

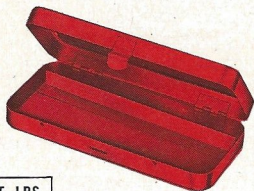
BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	12 1/4"	3 3/4"	1 1/4"	1.16

STEEL TOOL BOXES

SOCKET SET BOXES

NO. 4795 MIDGET TOOL BOX

Made for 1/4" drive midget sockets, handles and attachments. Keeps smaller tools in order with separate compartment for sockets.

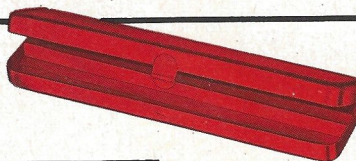


See Pages 40 and 41 for 1/4" drive sockets and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	6 3/4"	2 1/4"	1"	.52

NO. 5294 JUNIOR CUB TOOL BOX

Holds large number of 3/8" drive cub sockets and several attachments.

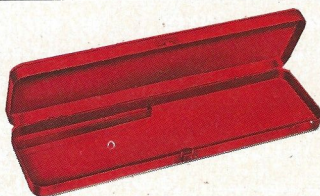


See Pages 42 and 43 for 3/8" drive sockets and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	10 1/4"	2 1/4"	1 1/4"	.83

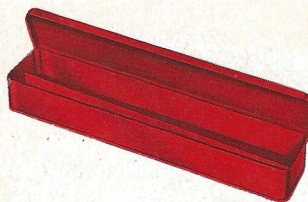
NO. 5295 CUB TOOL BOX

Made for 3/8" drive cub sockets, handles and attachments. Die-formed, one piece construction for added strength. Has end reinforcing flanges, rounded corners and a spring hasp.



See Pages 42 and 43 for 3/8" drive sockets and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	17 7/8"	5 1/4"	1 3/8"	1.70



NO. 5494 JUNIOR STANDARD TOOL BOX

Holds large number of 1/2" drive standard sockets, plus several handles and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	17"	3"	2"	1.86

See Pages 44 and 45 for 1/2" drive sockets and attachments.

NO. 5495 STANDARD TOOL BOX

Made for 1/2" drive standard sockets, handles and attachments. Deep-drawn, one-piece construction, reinforced edges and rounded corners for added strength. Has two socket compartments, speeder holder in lid, spring hasp and husky handle on side.

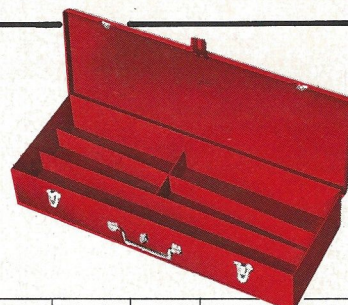


BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	19 3/16"	7 1/4"	2"	4.6

See Pages 44 and 45 for 1/2" drive sockets and attachments.

NO. 5695 HEAVY-DUTY TOOL BOX

Made for 3/4" heavy-duty sockets, handles and attachments. Construction throughout is extra heavy. Has five convenient compartments. Cover is held shut by two spring catches and a padlock hasp. Handle folds out of way when not in use.



BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	22 1/2"	8"	3 3/4"	9.0

See Pages 46 and 47 for 3/4" drive sockets and attachments.

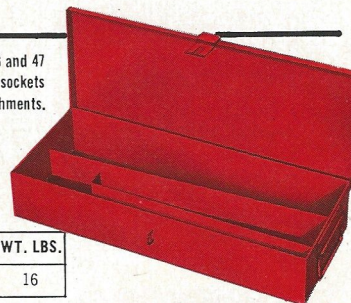
NO. 5696 HEAVY-DUTY TOOL BOX

Will hold full 3/4" socket line and attachments.

See Pages 46 and 47 for 3/4" drive sockets and attachments.

BOX OVERALL

LENGTH	WIDTH	HEIGHT	WT. LBS.
23 1/2"	9 1/4"	4"	16



NO. 5894 EXTRA HEAVY-DUTY TOOL BOX

Made for 1" square drive extra heavy-duty and 3/4" drive heavy-duty sockets, handles and attachments. Made of heavy gauge through-out—welded, riveted and strongly reinforced.



BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	30"	8 1/4"	5"	14

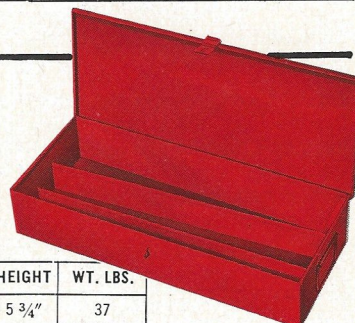
See Pages 48 and 49 for 1" drive sockets and attachments.

NO. 5895 EXTRA HEAVY-DUTY TOOL BOX

Will hold full 1" socket line and attachments.

See Pages 48 and 49 for 1" drive sockets and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	31"	13"	5 3/4"	37



KITS FOR TOOL SETS

Finest obtainable for storing and carrying tools. Vinyl plastic impregnation offers many advantages. It is noted for long wear, is flexible, won't crack or peel, is scratch and scuff proof, resists grease and oil, and is easy to clean with soap and water. The kits are red, with blue trim. They have strongly stitched seams, heavy tie strings, two grommets for hanging, and tough, crystal clear vinyl plastic pocket covers.

2402 2403 2404 2404 M 2405

2406 2407 2408 2410 2414

2411 2412 2413 2415 2416 2417 2418 2419 2420 2421 2424 2425 2426

DESCRIPTION OF KITS

NO.	FOR SET NO.	WIDTH	DEPTH	POCKETS	WT., LBS.
2402	2	12 7/8"	7 1/2"	12	.09
2403	47A	7 3/8"	8 1/4"	7	.07
2404	1200H	11 3/8"	10 1/2"	7	.14
2404M	1200M	11 3/8"	10 1/2"	7	.14
2405	1100K	10"	15"	5	.17
2406	3000H	21 1/4"	15 1/2"	10	.35
2407	3000OR	10 1/4"	8 3/4"	6	.10
2408	9900D	8 1/2"	9 1/4"	4	.10
2409	3000N	9 1/2"	11 3/4"	5	.12
2410	3300A	9 3/8"	5 3/4"	9	.06
2411	3	5 15/16"	8 1/8"	5	.04
2412	3400G	6 3/4"	11 1/2"	4	.09
2413	1200F	25"	18 1/2"	15	.58
2414	30000A	19"	13 1/8"	10	.28
2415	1200L	12 3/4"	13 1/8"	9	.18
2416	3200D	9 1/8"	5 3/4"	9	.06
2417	3200B	5 1/8"	5 3/4"	5	.04
2418	1100M	18 7/8"	18 1/2"	10	.50
2419	9200C	5 3/8"	17 5/8"	7	.12
2420	3200C	12"	8"	13	.12
2421	140A	4 1/2"	7 1/4"	1	.07
2424	9700A	8"	21 1/2"	5	.13
2425	9800A	6 3/4"	19 3/4"	5	.19
2426	9600A	6"	15 1/2"	5	.13

DROP FORGED ENGINEERS' WRENCHES

(CARBON STEEL)



15° ANGLE — FOR STANDARD NUTS AND CAP SCREWS

Drop forged from high grade carbon steel, processed by improved methods. Openings are broached or milled to standard tolerances. Edges and surfaces are smooth. Sizes are stamped on polished heads. Hardened. Baked black enamel finish.

**SINGLE
HEAD**

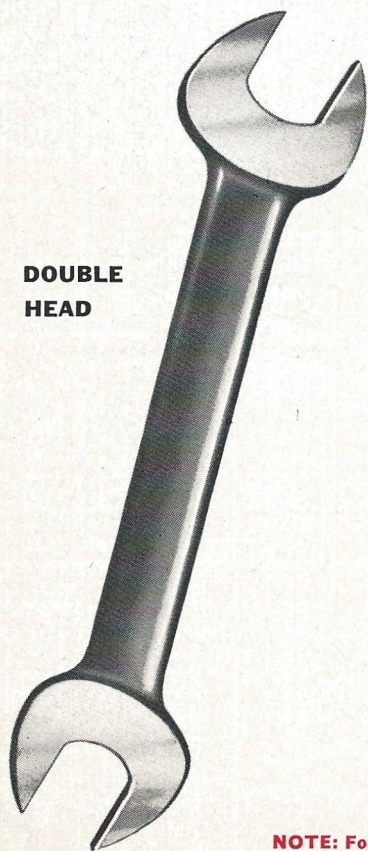


Federal Specs.:
GGG-W-636a, Type V
and
GGG-W-00636b

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. HEX. HEAD CAP SCREW; DIAM. SCREW	AMER. STD. LIGHT NUT (S.A.E.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	APPROX. WEIGHT EACH LBS
C700	3/8"	....	3/16"	....	*10"	4"	.09
C701	7/16"	....	1/4"	1/4"	1/4" & *12"	4 5/8"	.13
C1	1/2"	1/4"	5/16"	5/16"	....	4 5/8"	.13
C702	9/16"	....	3/8"	3/8"	5/16"	5 1/2"	.21
C2	1 9/32"	5/16"	....	....	....	5 1/2"	.21
C703	5/8"	....	7/16"	7/16"	3/8"	6 3/8"	.30
C3	1 1/16"	3/8"	....	....	....	6 3/8"	.30
C704	3/4"	....	1/2"	1/2"	7/16"	7 1/4"	.38
C705	1 3/16"	....	9/16"	....	1/2"	8 1/8"	.60
C5	7/8"	1/2"	5/8"	9/16"	9/16"	8 1/8"	.60
C6A	1 5/16"	....	....	5/8"	....	9 1/4"	.95
C6	3 1/32"	9/16"	....	....	....	9 1/4"	.95
C706	1"	....	3/4"	1 1/16"	5/8"	9 1/4"	.95
C7	1 1/16"	5/8"	....	3/4"	....	10 1/2"	1.30
C707	1 1/8"	....	7/8"	....	3/4"	10 1/2"	1.30
C8	1 1/4"	3/4"	1"	7/8"	....	12"	2.1
C8A	1 5/16"	....	....	....	7/8"	12"	2.1
C708A	1 3/8"	....	1 1/8"	....	....	12"	2.1
C9	1 7/16"	7/8"	....	1"	....	13 1/2"	2.5
C709	1 1/2"	....	1 1/4"	....	1"	13 1/2"	2.5
C10	1 5/8"	1"	1 3/8"	1 1/8"	....	15"	3.7
C11	1 13/16"	1 1/8"	....	1 1/4"	....	16 1/2"	4.3
C11A	1 7/8"	....	....	....	1 1/4"	16 1/2"	4.3
C12	2"	1 1/4"	....	1 3/8"	....	18 1/4"	6.3
C13	2 3/16"	1 3/8"	....	1 1/2"	....	20"	7.6
C13A	2 1/4"	....	....	....	1 1/2"	20"	7.6
C14	2 3/8"	1 1/2"	....	....	....	22"	9.9
C14A	2 7/16"	....	....	....	1 5/8"	22"	9.9
C15	2 9/16"	1 5/8"	....	....	....	24"	11.5
C15A	2 5/8"	....	....	....	1 3/4"	24"	11.5
C16	2 3/4"	1 3/4"	....	....	....	27"	14.5
C16B	2 13/16"	....	....	....	1 7/8"	27"	14.5

*Amer. Std. Machine Screw and Stove Bolt Nuts.

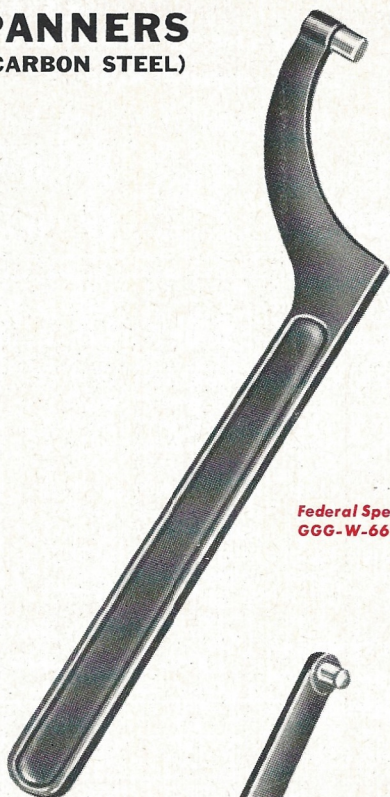
**DOUBLE
HEAD**



C721	5/16" & 3/8"	1/8" & ...	1/8" & 3/16"	...	...	...	4"	.08
C21	5/16" & 13/32"	1/8" & 3/16"	1/8" & ...	...	...	...	4"	.08
C722	5/16" & 7/16"	1/8" & ...	1/8" & 1/4"	...	1/4"	1/4"	4 5/8"	.13
C22	5/16" & 1/2"	1/8" & 1/4"	...	5/16"	...	5/16"	4 5/8"	.13
C723	3/8" & 7/16"	...	3/16" & 1/4"	...	1/4"	1/4"	4 5/8"	.13
C723A	3/8" & 1/2"	1/4"	3/16" & 5/16"	...	5/16"	...	4 5/8"	.13
C725	7/16" & 1/2"	1/4"	1/4" & 5/16"	1/4"	5/16"	1/4"	5 1/2"	.19
C725A	7/16" & 9/16"	...	1/4" & 3/8"	1/4"	3/8"	1/4" & 5/16"	5 1/2"	.19
C25A	7/16" & 5/8"	...	1/4" & 7/16"	1/4"	7/16"	1/4" & 3/8"	5 1/2"	.19
C725B	1/2" & 9/16"	1/4"	5/16" & 3/8"	5/16"	3/8"	...	5 1/2"	.19
C726	1/2" & 5/8"	1/4"	5/16" & 7/16"	5/16"	7/16"	...	6 1/2"	.28
C26	1/2" & 11/16"	1/4" & 3/8"	5/16"	...	...	...	6 1/2"	.28
C727	9/16" & 5/8"	...	3/8" & 7/16"	3/8"	7/16"	5/16" & 3/8"	6 1/2"	.28
27C	9/16" & 11/16"	...	3/8"	3/8"	...	5/16"	6 1/2"	.28
C728	9/16" & 3/4"	...	3/8" & 1/2"	3/8"	1/2"	5/16" & 7/16"	7 1/2"	.39
C28S	5/8" & 25/32"	...	7/16"	7/16"	...	3/8"	7 1/2"	.39
C729	5/8" & 3/4"	...	7/16" & 1/2"	7/16"	1/2"	3/8" & 7/16"	7 1/2"	.39
C29B	1 1/16" & 3/4"	3/8"	...	1/2"	1/2"	7/16"	7 1/2"	.39
C30	1 1/16" & 7/8"	3/8" & 1/2"	...	5/8"	...	9/16"	8 1/2"	.55
C731	3/4" & 13/16"	...	1/2" & 9/16"	1/2"	9/16"	7/16" & 1/2"	8 1/2"	.55
C731A	3/4" & 7/8"	1/2"	1/2" & 5/8"	1/2"	5/8"	7/16" & 9/16"	8 1/2"	.55
C31	25/32" & 7/8"	7/16" & 1/2"	...	5/8"	...	9/16"	8 1/2"	.55
C731B	13/16" & 7/8"	1/2"	9/16" & 5/8"	9/16"	5/8"	1/2" & 9/16"	8 1/2"	.55
C33A	7/8" & 15/16"	1/2"	5/8"	5/8"	9/16"	9/16"	9 1/2"	.84
C733	7/8" & 1"	1/2"	5/8" & 3/4"	5/8"	3/4"	9/16" & 5/8"	9 1/2"	.84
C33C	15/16" & 1"	...	...	3/4"	5/8"	...	9 1/2"	.84
C34	7/8" & 1 1/16"	1/2" & 5/8"	5/8"	...	9/16" & 3/4"	9/16"	10 3/4"	1.2
C735	1" & 1 1/16"	...	3/4" & 7/8"	...	...	5/8" & 3/4"	10 3/4"	1.2
C37	1 1/16" & 1 1/4"	5/8" & 3/4"	...	...	3/4" & 7/8"	...	12"	1.5
C737	1 1/8" & 1 1/4"	...	7/8" & 1"	...	7/8"	3/4"	12"	1.5
C37A	1 1/8" & 1 5/16"	...	7/8" & 1"	...	...	3/4" & 7/8"	12"	1.5
C39	1 1/4" & 1 7/16"	3/4" & 7/8"	...	...	7/8" & 1"	...	13 1/2"	2.3
C40	1 1/4" & 1 5/8"	3/4" & 1"	...	...	7/8" & 1 1/8"	...	15 3/4"	3.5
C41	1 7/16" & 1 5/8"	7/8" & 1"	...	...	1" & 1 1/8"	...	15 3/4"	3.5
C42	1 7/16" & 1 13/16"	7/8" & 1 1/8"	...	...	1" & 1 1/4"	...	17"	5.3
C42A	1 1/2" & 1 11/16"	...	1 1/8" & 1 1/4"	...	...	1" & 1 1/8"	17"	5.3
C43	1 5/8" & 1 3/4"	1" & 1 1/8"	...	...	1 1/8" & 1 1/4"	...	17"	5.3
C44	1 5/8" & 2"	1" & 1 1/4"	...	...	1 1/8" & 1 3/8"	...	19"	7.5
C44A	1 11/16" & 1 7/8"	...	1 1/4"	...	...	1 1/8" & 1 1/4"	19"	7.5
C45	1 13/16" & 2"	1 1/8" & 1 1/4"	...	...	1 1/4" & 1 3/8"	...	19"	7.5

NOTE: For standard nut and bolt sizes corresponding to nominal wrench openings see chart on page 76.

SPANNERS (CARBON STEEL)

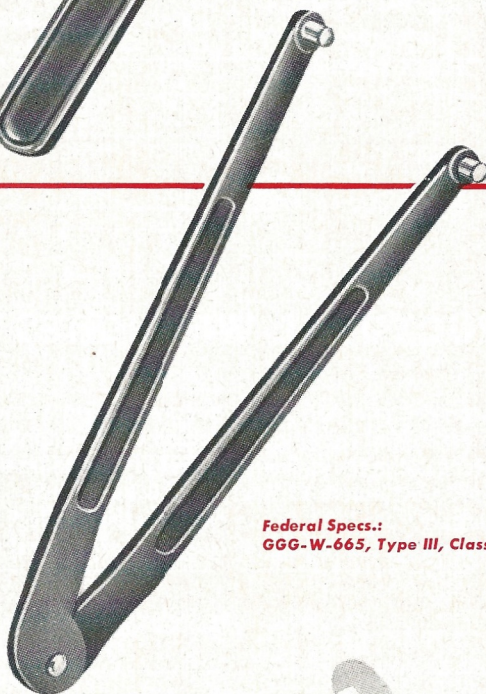


Federal Specs.:
GGG-W-665, Type II

PIN SPANNER

Single milled pin fits into notches of round nuts. Pin and wrench are drop forged together from high grade carbon steel. Smooth surfaces. Hardened. Baked black enamel finish.

NO.	FOR CIRCLE; DIAMETER	EXTREME LENGTH APPROX.	FINISHED DIAMETER PIN	APPROX. WEIGHT EACH LBS.
C452	1"	4"	3/16"	.08
C453	1 1/4"	4 1/2"	13/64"	.10
C454	1 1/2"	5"	7/32"	.14
C455	1 3/4"	5 1/2"	15/64"	.16
C456	2"	6"	1/4"	.21
C457	2 1/4"	6 1/2"	17/64"	.27
C458	2 1/2"	7"	9/32"	.31
C459	2 3/4"	7 1/2"	19/64"	.35
C460	3"	8"	5/16"	.48
C461	3 1/4"	8 1/2"	21/64"	.51
C462	3 1/2"	9"	11/32"	.56
C463	3 3/4"	9 1/2"	23/64"	.66
C464	4"	10"	3/8"	.76
C466	5"	12"	7/16"	1.3
C468	6"	14"	1/2"	1.9

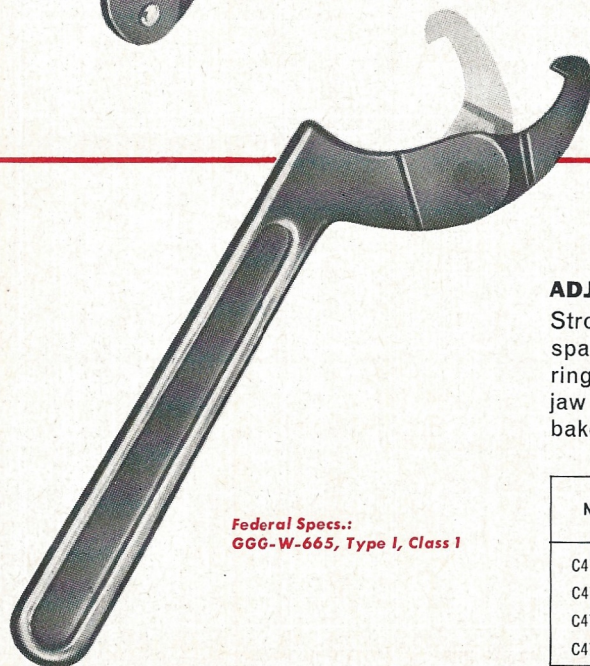


Federal Specs.:
GGG-W-665, Type III, Class I

ADJUSTABLE FACE SPANNER

A valuable tool for operations where the number of center dimensions vary. Pins and wrench are drop forged together from high grade steel. Milled pins. Smooth surfaces. Hardened. Baked black enamel finish.

NO.	EXTREME CAPACITY	EXTREME LENGTH APPROX.	DIAMETER OF PINS	WEIGHT EACH LBS.
C482	2"	6 3/8"	3/16"	.33
C483	3"	8 1/4"	1/4"	.59
C484	4"	10 3/8"	5/16"	1.1



Federal Specs.:
GGG-W-665, Type I, Class I

ADJUSTABLE HOOK SPANNER

Strong and easily adjusted to many sizes, this is an ideal spanner on spindle bearings or for adjusting collars and slotted rings on automatic machinery. Jaw and bar are drop forged, jaw hardened and tempered. Smooth surfaces, baked black enamel finish.

NO.	CAPACITY FOR CIRCLES, DIAMETER	APPROX. LENGTH	THICKNESS		DEPTH HOOK	WEIGHT EACH LBS.
			HANDLE	HOOK		
C471	3/4" to 2"	6 3/8"	1/4"	11/32"	1/8"	.28
C472	1 1/4" to 3"	8 1/8"	9/32"	13/32"	5/32"	.52
C474	2" to 4 3/4"	11 3/8"	5/16"	15/32"	3/16"	.95
C474A	4 1/2" to 6 1/4"	12 1/8"	5/16"	15/32"	1/4"	1.1

CONSTRUCTION WRENCHES

(CARBON STEEL)



15° ANGLE

Deep opening assures strong bearing on square nuts. Long, round, tapered handle inserts easily into bolt holes when bringing them into line. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over. Shot blasted.

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICKNESS HEAD	APPROX. WEIGHT EACH LBS.
C205A	13/16"	....	1/2"	14 1/2"	17/32"	1.0
C205	7/8"	1/2"	9/16"	14 1/2"	17/32"	1.0
C206	31/32"	9/16"	....	14 1/2"	17/32"	1.0
C206B	1"	....	5/8"	14 1/2"	17/32"	1.0
C207	1 1/16"	5/8"	....	17"	5/8"	1.7
C207A	1 1/8"	....	3/4"	17"	5/8"	1.7
C208	1 1/4"	3/4"	....	19"	3/4"	2.6
C208A	1 5/16"	....	7/8"	19"	3/4"	2.6
C209	1 7/16"	7/8"	....	19"	3/4"	3.7
C209A	1 1/2"	....	1"	19"	3/4"	3.7
C210	1 5/8"	1"	....	25"	7/8"	5.3
C210A	1 11/16"	....	1 1/8"	25"	7/8"	5.3
C211	1 13/16"	1 1/8"	....	25"	7/8"	7.3
C211A	1 7/8"	....	1 1/4"	25"	7/8"	7.3
C212	2"	1 1/4"	....	25"	7/8"	7.3

STRUCTURAL WRENCHES

(CARBON STEEL)

Jaws are deep and narrow for secure seating on nuts. Handle angle and offset clears close obstructions with safety to the hand. Round, tapered handle inserts easily into bolt holes. Wrench is well balanced. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over and shot blasted.

Federal Specs.: GGG-W-636a, Type IX, Class 1
and GGG-W-00636b

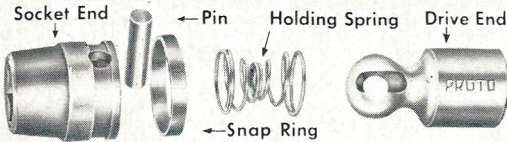
NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICKNESS HEAD	HANDLE OFFSET		APPROX. WEIGHT EACH LBS.
						AT HEAD	AT END	
C901A	7/16"	....	1/4"	9 1/2"	11/32"	9/16"	1 1/2"	.32
C901	1/2"	1/4"	....	9 1/2"	11/32"	9/16"	1 1/2"	.32
C901B	9/16"	....	5/16"	9 1/2"	11/32"	9/16"	1 1/2"	.32
C902	19/32"	5/16"	....	9 1/2"	11/32"	9/16"	1 1/2"	.32
C903A	5/8"	....	3/8"	12"	7/16"	3/4"	1 11/16"	.63
C903	11/16"	3/8"	....	12"	7/16"	3/4"	1 11/16"	.63
C904A	3/4"	....	7/16"	12"	7/16"	3/4"	1 11/16"	.63
C904	25/32"	7/16"	....	12"	7/16"	3/4"	1 11/16"	.63
C905A	13/16"	....	1/2"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C905	7/8"	1/2"	9/16"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C906	31/32"	9/16"	....	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C906B	1"	....	5/8"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C907	1 1/16"	5/8"	....	17"	5/8"	1"	2 3/8"	1.9
C907A	1 1/8"	....	3/4"	17"	5/8"	1"	2 3/8"	1.9
C908	1 1/4"	3/4"	....	19 1/2"	3/4"	1 3/8"	2 1/2"	2.8
C908A	1 5/16"	....	7/8"	19 1/2"	3/4"	1 3/8"	2 1/2"	2.8
C909	1 7/16"	7/8"	....	19 1/2"	3/4"	1 3/8"	2 1/2"	2.8
C909A	1 1/2"	....	1"	19 1/2"	3/4"	1 3/8"	2 1/2"	2.8
C910	1 5/8"	1"	....	23"	7/8"	1 5/8"	2 3/4"	5.6
C910A	1 11/16"	....	1 1/8"	23"	7/8"	1 5/8"	2 3/4"	5.6
C911	1 13/16"	1 1/8"	....	23"	7/8"	1 5/8"	2 3/4"	5.6
C911A	1 7/8"	....	1 1/4"	23"	7/8"	1 5/8"	2 3/4"	5.6
C912	2"	1 1/4"	....	23"	7/8"	1 5/8"	2 3/4"	5.6

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

PARTS

Listed numerically by tool number

BALL-TYPE POWER UNIVERSAL SOCKET PARTS



Socket No.	Drive Size	Socket End Part No.	Drive End Part No.	Pin Part No.	Holding Spring Part No.	Snap Spring Part No.
7273	3/8"	7273A	7270PF	7270PN	7270SP	7270SR
7274	3/8"	7274A	7270PF	7270PN	7270SP	7270SR
7275	3/8"	7275A	7270PF	7270PN	7270SP	7270SR
7276	3/8"	7276A	7270PF	7270PN	7270SP	7270SR
7277	3/8"	7277A	7270PF	7270PN	7270SP	7270SR
7474	1/2"	7474A	7470PF	7470PN	7470SP	7470SR
7475	1/2"	7475A	7470PF	7470PN	7470SP	7470SR
7476	1/2"	7476A	7470PF	7470PN	7470SP	7470SR
7477	1/2"	7477A	7470PF	7470PN	7470SP	7470SR
7478	1/2"	7478A	7470PF	7470PN	7470SP	7470SR
7479	1/2"	7479A	7470PF	7470PN	7470SP	7470SR

BALL-TYPE POWER UNIVERSAL JOINT PARTS

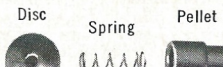
Joint No.	Drive Size	Female End Part No.	Male End Part No.
7270	3/8"	7270PF	7270PM
7470	1/2"	7470PF	7470PM
7670	5/8"	7670PF	7670PM

Joint No.	Pin Part No.	Pellet Part No.	Pellet Spring Part No.
7270	7270PN	7270PP	7270PS
7470	7470PN	7470PP	7470PS
7670	7670PN	7670PP	7670PS

Joint No.	Drive Size	Holding Spring Part No.	Snap Ring Part No.
7270	3/8"	7270SP	7270SR
7470	1/2"	7470SP	7470SR
7670	5/8"	7670SP	7670SR

POWER EXTENSION SOCKET-HOLDING ATTACHMENT PARTS

Fraction in Part No. Indicates Square Drive Size.



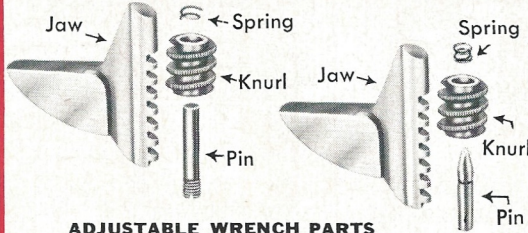
Part No.	Part
7100 1/4 DD	Disc
7100 1/4 P	Pellet
7100 1/4 S	Spring
7100 3/8 DD	Disc
7100 3/8 P	Pellet
7100 3/8 S	Spring
7100 1/2 DD	Disc
7100 1/2 P	Pellet
7100 1/2 S	Spring
7100 5/8 DD	Disc
7100 5/8 P	Pellet
7100 5/8 S	Spring

PLIER PARTS

Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Spring No.
201	240B	235	235B	241	241B	248S	248SB	275	240B	205 Series	285S-S
202	240N	236	235N	242	242B	248P	248PB	276	240N	211S	285S-S
203	240N	238	240N	243	243B		243N	278	240N	224	285S-S
230	235B	239	240N	245	245B	257	257B	280	240N	250	250-S
234	234P	240	240B	246	246B		246N		240N	251	250-S
	234N		240N		240N				280B	282 thru	285S-S
									280N	287BS	

"REGULAR" Prior to 1958

"CLIK-STOP" and "REGULAR" after 1958:



ADJUSTABLE WRENCH PARTS

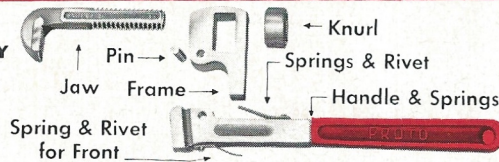
Wrench No.	Polished Jaw Part No.	Plated Jaw Part No.	Plated Knurl Part No.	Threaded Pin Part No.	Spring Cylinder Part No.	See Note: Tapered Pin & Hour-Glass Spr'g Part No.
704	704J	704JP	704KP	704N	704R	704NRH
704L	704LJ	704LJP	704LKP	704N	704R	704NRH
704S	704SJ	704SJP	704SKP	704N	704R	704NRH
704SL	704SLJ	704SLJP	704SLKP	704N	704R	704NRH
706	706J	706JP	706KP	706N	706R	706NRH
706L	706LJ	706LJP	706LKP	706N	706R	706NRH
706S	706SJ	706SJP	706SKP	706N	706R	706NRH
706SL	706SLJ	706SLJP	706SLKP	706N	706R	706NRH
708	708J	708JP	708KP	708N	708R	708NRH
708L	708LJ	708LJP	708LKP	708N	708R	708NRH
708S	708SJ	708SJP	708SKP	708N	708R	708NRH
708SL	708SLJ	708SLJP	708SLKP	708N	708R	708NRH
710	710J	710JP	710KP	710N	710R	710NRH
710L	710LJ	710LJP	710LKP	710N	710R	710NRH
710S	710SJ	710SJP	710SKP	710N	710R	710NRH
710SL	710SLJ	710SLJP	710SLKP	710N	710R	710NRH
712	712J	712JP	712KP	712N	712R	712NRH
712L	712LJ	712LJP	712LKP	712N	712R	712NRH
712S	712SJ	712SJP	712SKP	712N	712R	712NRH
712SL	712SLJ	712SLJP	712SLKP	712N	712R	712NRH
715	715J	715JP	715KP	715N	715R	715NRH
715L	715LJ	715LJP	715LKP	715N	715R	715NRH
715SL	715SLJ	715SLJP	715SLKP	715N	715R	715NRH
716	716J	716JP	716KP	716N	716R	716NRH
716L	716LJ	716LJP	716LKP	716N	716R	716NRH
716SL	716SLJ	716SLJP	716SLKP	716N	716R	716NRH
720	720J	720JP	720KP	720N	720R	720NRH
720L	720LJ	720LJP	720LKP	720N	720R	720NRH
720S	720SJ	720SJP	720SKP	720N	720R	720NRH
720SL	720SLJ	720SLJP	720SLKP	720N	720R	720NRH

†For wrenches with pin hole drilled completely through head.

NO. 700A ADJ. WRENCH SPARE PARTS KIT

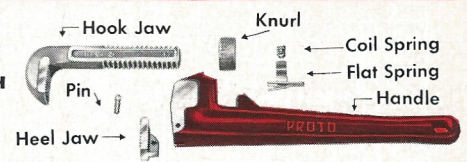
NO.	QUAN.
704J	2
704JP	2
706J	3
706JP	3
708J	3
708JP	3
710J	1
710JP	1
712J	1
712JP	1
716J	1
720J	1
704KP	1
704KPL	1
706KP	1
706KPL	1
708KP	2
708KPL	2
710KP	1
710KPL	1
712KP	1
712KPL	1
716KP	1
716KPL	1
720KP	1
720KPL	1
704N	2
704NRH	2
706N	2
706NRH	2
708N	3
708NRH	2
710N	1
710NRH	1
712N	1
712NRH	1
716N	1
716NRH	1
720N	1
720NRH	1
704R	2
706R	2
708R	3
710R	1
712R	1
716R	1
720R	1

NORMAL-DUTY PIPE WRENCH PARTS



Wrench No.	Handle & Springs Part No.	Jaw Part No.	Knurl Part No.	Pin for Frame Part No.	Frame & Pin Part No.	Springs & Rivet for Back Part No.	Spring & Rivet for Front Part No.
806	806H	806J	806K	806P	806PF	806SF	806SF
808	808H	808J	808K	808P	808PF	808SF	808SF
810	810H	810J	810K	810P	810PF	810SF	810SF
814	814H	814J	814K	814P	814PF	814SF	814SF
818	818H	818J	818K	818P	818PF	818SF	818SF
824	824H	824J	824K	824P	824PF	824SF	824SF

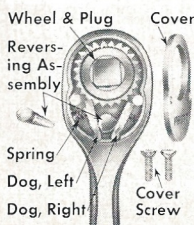
HEAVY-DUTY PIPE WRENCH PARTS



Wrench No.	Handle, Hook Jaw & Pin Assembly Part No.	Hook Jaw Part No.	Heel Jaw & Pin Part No.	Knurl Part No.	Flat Spring Part No.	Coil Spring Part No.
806HD	806A	806B	806C	806D	806E	806G
808HD	808A	808B	808C	808D	808E	808G
810HD	810A	810B	810C	810D	810E	810G
814HD	814A	814B	814C	814D	814E	814G
818HD	818A	818B	818C	818D	818E	818G
824HD	824A	824B	824C	824D	824E	824G

REVERSIBLE RATCHET PARTS

For Handy Repair Kits, see 4749RK, 5249RK, 5449RK, 5450RK, page 41.



Ratchet No.	Drive Size	Cover Part No.	Dog, Left Part No.	Dog, Right Part No.	Cover Screw Part No.	Reversing Assembly Part No.	Spring Part No.	Wheel w/Plug Part No.
4749	1/4"	4749C	4749DL	4749DR	4749H	4749R	4749S	4749W
5249	3/8"	5249C	5249DL	5249DR	5249H	5249R	5249S	5249W
5449	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5450	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5649	3/4"	5649C	5649DL	5649DR	5649H	5649R	5649S	5649W
5848	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	*
5849	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	*

*Ratchet No. 5848 has No. 5848W Female Wheel, Ratchet No. 5849 has No. 5848W Female Wheel and No. 5852 Male Plug.

Ratchet No.	Cover Clip Part No.	Dog Part No.	Dog Ball Part No.	Dog Pin Part No.	Dog Pin Ring Part No.
4750	4750C	4750D	4750DB	4750DP	4750DPR
Drive Size	Plug Part No.	Retaining Ring Part No.	Spring Part No.	Female Wheel Part No.	
1/4"	4750G	4750RR	4750S	4750W	

STANDARD NUT, BOLT AND SCREW SIZING CHART

NOMINAL OPENING SIZES OF PROTO WRENCHES OR SOCKETS IN INCHES TO FIT STANDARD BOLT HEADS, NUTS AND SCREW HEADS



THREAD
DIAMETER
OF BOLT,
NUT OR
SCREW

Locate thread diameter of bolt, nut or screw in extreme left or right column. Then move across to box which has proper identification of bolt, nut or screw at top of vertical column. The size in this particular box is the nominal opening size in inches of the PROTO wrenches and sockets that will fit.

American Standards Association—ASA B18.2, Appendix I

NUTS

BOLTS AND SCREWS

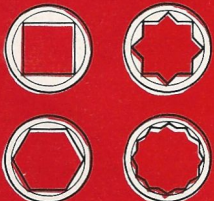
FINISHED HEX HEX JAM HEX SLOTTED HEX THICK HEX THICK SLOTTED HEX CASTLE	REGULAR SQUARE HEX HEX JAM SEMI- FINISHED HEX HEX JAM HEX SLOTTED	HEAVY SQUARE HEX HEX JAM SEMI- FINISHED HEX HEX JAM HEX SLOTTED	MACHINE SCREW & STOVE BOLT NUTS	FINISHED & REGULAR SQ. BOLTS & HEX BOLTS SEMI- FINISHED HEX. BOLTS HEX CAP SCREWS	HEAVY BOLTS HEX SEMI- FINISHED HEX & FINISHED HEX	LAG BOLTS SQUARE	SET SCREWS SQUARE
--	---	---	--	---	---	---------------------	----------------------

Use wrench or socket size shown below

Use wrench or socket size shown below

#0 & 1				5/32					#0 & 1
#2 & 3				3/16					#2 & 3
#4				1/4					#4
#5 & 6				5/16					#5 & 6
#8				11/32					#8
#10				3/8			9/32	3/16	#10
#12				7/16				7/32	#12
1/4"	7/16	7/16	1/2	7/16	†3/8 - 7/16		3/8	1/4	1/4"
5/16"	1/2	9/16	9/16	9/16	1/2		1/2	5/16	5/16"
3/8"	9/16	5/8	11/16	5/8	9/16		9/16	3/8	3/8"
7/16"	11/16	3/4	3/4		5/8		5/8	7/16	7/16"
1/2"	3/4	13/16	7/8		3/4	7/8	3/4	1/2	1/2"
9/16"	7/8	7/8	15/16		13/16			9/16	9/16"
5/8"	15/16	1	1 1/16		15/16	1 1/16	15/16	5/8	5/8"
3/4"	1 1/8	1 1/8	1 1/4		1 1/8	1 1/4	1 1/8	3/4	3/4"
7/8"	1 5/16	1 5/16	1 7/16		1 5/16	1 7/16	1 5/16	7/8	7/8"
1"	1 1/2	1 1/2	1 5/8		1 1/2	1 5/8	1 1/2	1	1"
1 1/8"	1 11/16	1 11/16	1 13/16		1 11/16	1 13/16	1 11/16	1 1/8	1 1/8"
1 1/4"	1 7/8	1 7/8	2		1 7/8	2	1 7/8	1 1/4	1 1/4"
1 3/8"	2 1/16	2 1/16	2 3/16		2 1/16	2 3/16		1 3/8	1 3/8"
1 1/2"	2 1/4	2 1/4	2 3/8		2 1/4	2 3/8		1 1/2	1 1/2"
1 5/8"	2 7/16	2 7/16	2 9/16		2 7/16	2 9/16			1 5/8"
1 3/4"	2 5/8	2 5/8	2 3/4		2 5/8	2 3/4			1 3/4"
1 7/8"	2 13/16	2 13/16	2 15/16		2 13/16	2 15/16			1 7/8"
2"	3	3	3 1/8		3	3 1/8			2"
2 1/4"	3 3/8	3 3/8	3 1/2		3 3/8	3 1/2			2 1/4"
2 1/2"	3 3/4	3 3/4	3 7/8		3 3/4	3 7/8			2 1/2"
2 3/4"	4 1/8	4 1/8	4 1/4		4 1/8	4 1/4			2 3/4"
3"	4 1/2	4 1/2	4 5/8		4 1/2	4 5/8			3"

†Regular Square Bolts Only.



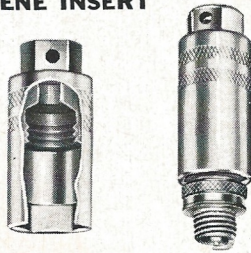
4- and 8-Point Sockets Are Used on Square Bolt Heads, Nuts and Screw Heads.



6- and 12-Point Sockets Are Used on Hexagon Bolt Heads, Nuts and Screw Heads.

SUPPLEMENT TO PROTO CATALOG NO. 6021

NO. 5026HPA & 5326HPA NEW SPARK PLUG SOCKETS WITH REDESIGNED NEOPRENE INSERT

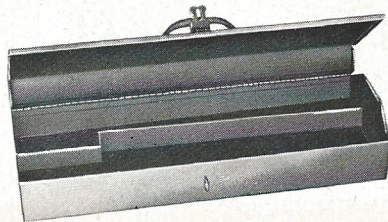


To remove and replace spark plugs more quickly and without breakage. Insert lasts longer—has special new grooves that grip on brass tip as well as porcelain. Socket—hot-broached of special alloy steel; hex opening for greater strength; polished and chrome plated.

NUMBER	DRIVE	OPENING	WT.
5026HPA	3/8"	13/16"	.28
5326HPA	1/2"	13/16"	.28
5026RA	----	----	----

SPARE INSERT NO. 5026R (USED ON 5026HP & 5326HP) STILL AVAILABLE

NO. 5496 HIP ROOF TOOL BOX



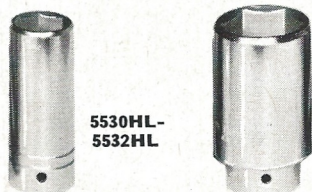
Smaller hip roof box with ample room for long handled tools. Two compartments for smaller tools. Full-length piano hinge attaches cover to box. Metal carrying handle; two snap catches; center hasp for padlock. 22 gauge steel.

**THIS BOX
REPLACES
NO. 5495**

DIMENSIONS
18 1/2" x 5 3/4" x 3 5/8"

Individually cartoned. Durable red finish. Wt. 3 Lbs. 4 Oz.

NO. 5530HL THRU 5552HL 3/4" DEEP LENGTH SOCKETS



5534HL-
5552HL

Deep length for bolt clearance Hex opening for greater power. Protoloy (R) steel for great toughness. Openings hot-broached to close tolerances. Polished and chrome plated for rust prevention.

[CONT.]

NO. 5530HL — 5552HL [CONT.]

NO.	NOMINAL OPENING SIZE	INSIDE CLEAR- ANCE	OUTSIDE DIAM- ETER	TOTAL LGTH.	WT. LBS.
5530HL	15/16"	1 1/16"	1 3/8"	3 1/2"	.78
5532HL	1"	1 1/16"	1 7/16"	"	.82
5534HL	1 1/16"	2 5/32"	1 9/16"	"	.97
5536HL	1 1/8"	2 5/32"	1 5/8"	"	1.04
5540HL	1 1/4"	2 9/32"	1 3/4"	"	1.16
5542HL	1 5/16"	1 5/16"	1 7/8"	"	1.30
5544HL	1 3/8"	1"	1 15/16"	"	1.40
5546HL	1 7/16"	1 1/16"	2"	"	1.42
5548HL	1 1/2"	1 1/16"	2 1/16"	"	1.52
5552HL	1 5/8"	1 3/16"	2 1/4"	"	1.78

NO. 5649RK RATCHET REPAIR KIT FOR 3/4" DRIVE



Each "RK" Kit contains 1 cover, 2 cover screws, 1 dog left, 1 dog right, 1 reversing assembly, 2 springs, 1 wheel w/plug.

NO. 9966 ROLL CAB



Sturdy roller cabinet with three drawers and generous storage compartment with shelf. Reinforced top and front panel. When panel is closed, it locks all drawers. When open, it slides out of the way under bottom drawer. Panel permanently attached to cabinet. Four heavy-duty casters, 4" Dia., two swivel (with brakes) and two fixed. Chrome plated drawer pulls and side handles. Cylinder-type key change lock. Drawer suspensions are sturdy and free-sliding. Finished in bright red baked enamel.

Wt. 78 Lbs.

MODEL NO.	PART	LGTH.	WDTH.	HEIGHT
9966	Cab. Ovrl.	27 1/4"	18 1/4"	32"
	S Drawers	23 1/8"	16 1/8"	1 7/8" ea.
	1 Drawer	23 1/8"	16 1/8"	4 1/8"
	1 Shelf	27"	12"	-----

SPARE PARTS

JAWS & KNURLS

WRENCH NO.	POLISHED JAW PART NO.	PLATED JAW PART NO.	PLATED KNURL PART NO.
718		718JP	718KP
718L		718JP	718KPL

PINS & SPRINGS

WRENCH NO.	THREADED PIN PART NO.	SPRING CYL. PART NO.	SEE NOTE XX TAPERED PIN & HOUR-GLASS SPRG. PART NO.
718			718NRH
718L			718NRH

JAWS & KNURLS

WRENCH NO.	POLISHED JAW PART NO.	PLATED JAW PART NO.	PLATED KNURL PART NO.
718S	718J	....	718KP
718SL	718J	....	718KPL

PINS & SPRINGS

WRENCH NO.	THREADED PIN PART NO.	SPRING CYL. PART NO.	SEE NOTE XX TAPERED PIN & HOUR-GLASS SPRG. PART NO.
....			718NRH
....			718NRH

100 SERIES C-CLAMP PARTS

CLAMP NO.	SPINDLE & HANDLE	PERMA-PAD & RING
102	102A	102P
103	103A	103P
104	104A	104P
106	106A	106P
108	108A	108P
110	110A	110P
112	112A	112P

400 SERIES C-CLAMP PARTS

CLAMP NO.	SPINDLE & HANDLE	PERMA-PAD & RING
402	402A	402P
403	403A	402P
404	404A	404P
406	406A	404P
408	408A	404P
410	408A	404P
412	412A	404P
402S	402SA	402SP
403S	403SA	402SP
404S	404SA	404SP
406S	406SA	404SP
408S	408SA	404SP
410S	408SA	404SP
412S	412SA	404SP

NO. 396T REPLACEMENT TIP FOR TRUARC PLIER NO. 396

only
PROTO
makes
screwdrivers
like
this!



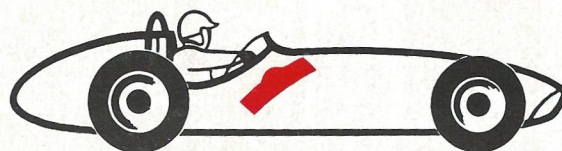
Round or square.
Hot forging from
Protoloy® alloy steel
resists wear and distortion
under pressure. Heat-treated
full length. Polished,
plated for added protection.
Extra thick square shank
for use with wrench.

Handle molded
around flattened tang...
locked for life.  approved.
Deep, wide flutes,
bigger handle for maximum
power, less fatigue. Large,
smooth end prevents sore
palm. Tough, clear plastic
proves quality and
method of joining.

Proto Screwdrivers are available in a complete range of sizes and types, including: plastic and wood handles; keystone, cabinet, Phillips, and clutch-head tips, round and square shanks; lengths up to 2½ feet; offset type; screwholding drivers; and screwdriver sockets.

It is this high, professional quality and wide variety of types and sizes that has won for Proto Tools increasing recognition in the industrial, hardware, plumbing, automotive and other fields. An example of this recognition is Proto's appointment as exclusive hand tool supplier for the Indianapolis "500."

Gradual taper,
squared tip
for snug fit in
screw heads.

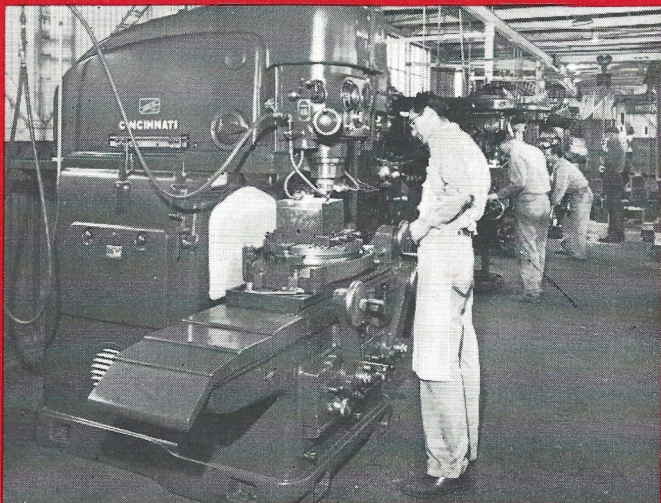
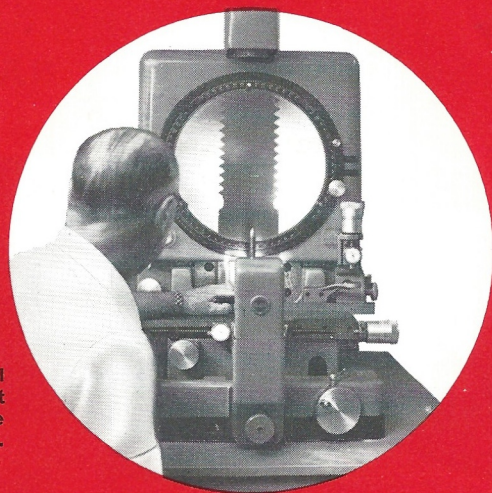


**OFFICIAL TOOLS
INDIANAPOLIS "500"**

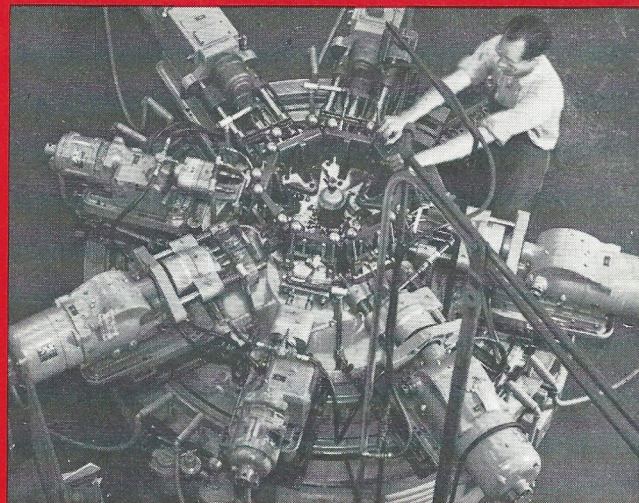
PROTO MODERN MANUFACTURING METHODS

More than a half-century ago when PROTO tools were made in a small blacksmith shop, their professional quality was due to *skilled workmanship*. This continues to be the reason for PROTO'S leadership in the industry. In operations where machines can save time and money, and *improve quality*, PROTO uses the most efficient precision automatic machinery.

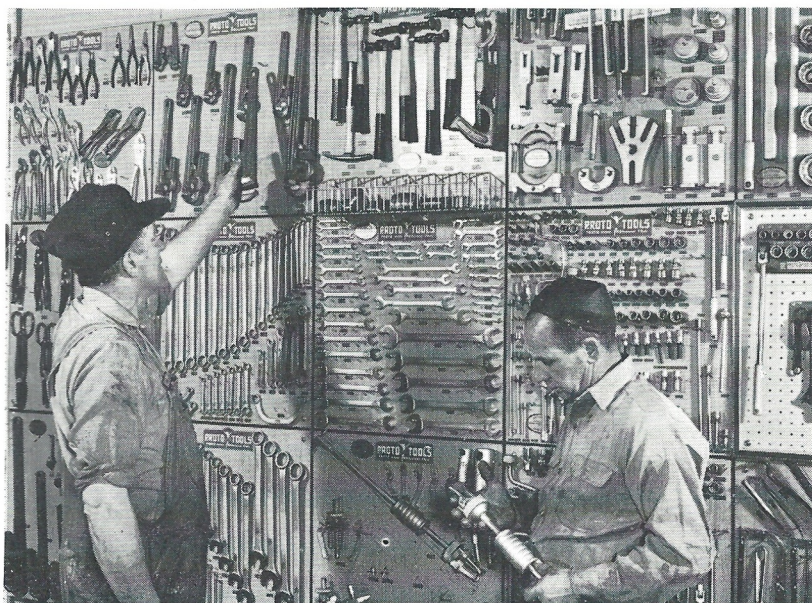
This contour projector is typical of the modern equipment and care used in the manufacture of PROTO tools.



Modern milling machines in PROTO die sinking department are operated by highly skilled workmen.



Special machines designed by PROTO perform many precision operations at once on a tool, keeping quality up and cost down.

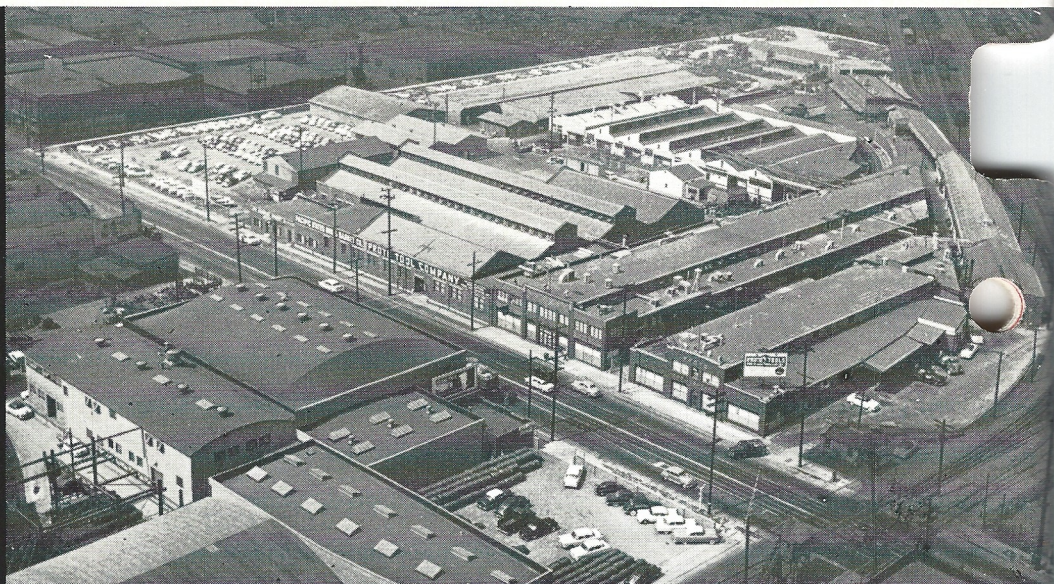
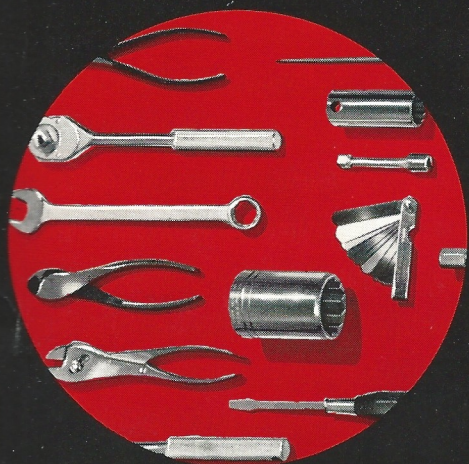


SELF-SERVICE MERCHANDISER PANELS

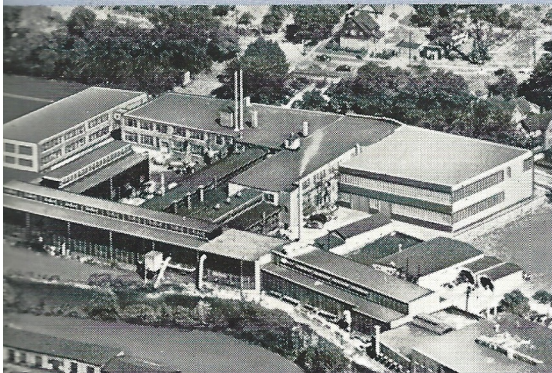
Leading tool dealers everywhere display PROTO tools on time-saver merchandisers of several types. This one, known as "Proto Tool Headquarters," has a complete selection of each type tool on each panel arranged by sizes, with easy-to-see tool numbers and sizes.

PROTO[®]

NATION-WIDE MANUFACTURING FACILITIES



Los Angeles, California, Factory and Main Offices



Jamestown, N.Y., Factory and Eastern Warehouse



London, Ontario, Factory (PROTO TOOLS OF CANADA, Ltd.)



Los Angeles, California, Special Tools Factory (ITM)

Since the firm was established in 1907 the demand for professional quality PROTO tools has increased until PROTO has become a world leader in its field. This professional quality and continually growing popularity of PROTO tools is due in large measure to the skilful workmanship and teamwork of PROTO employees, salesmen, alert distributors and dealers throughout North America and abroad.



PROTO TOOL COMPANY

DIVISION OF PENDLETON TOOL INDUSTRIES, INC.

Los Angeles 54, California

CATALOG NO. 6120